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DEPARTMENT OF CITY PLANNING

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FINAL

ENVIRONMENTAL IMPACT REPORT

505 MONTGOMERY STREET

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DRAFT EIR PUBLICATION DATE: NOVEMBER 25, 1983

DRAFT EIR PUBLIC COMMENT PERIOD: NOVEMBER 25, 1983-JANUARY 12, 1984

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CERTIFICATION DATE: JUNE 28, 1984



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I. SUMMARY

A. PROJECT DESCRIPTION

The Empire Group proposes to construct a new office building and refurbish the exteriors of two existing buildings, with a variety of street-level retail uses. The sponsor's objectives are to realize a return on investment through the construction of a high-quality building which would contribute to the vitality of the area, and to preserve the scale of a portion of Commercial and Sacramento Sts., by retaining two existing buildings on the western portion of the site and using remaining development rights associated with those two buildings in a new building on the eastern portion of the site. The project architect is Skidmore, Owings & Merrill.

The project site comprises Lots 5, 6, 6A, 7, 8, 9, 10, 11, 27 and 28 in Assessor's Block 227, at the northwest corner of Montgomery and Sacramento Sts., and contains about 26,170 sq. ft. The site is occupied by ten buildings, containing office, banking, restaurant, and retail uses. Eight buildings, on Lots 5, 6, 6A, 7, 8, 9, 10 and 28, all on the eastern part of the site, would be demolished for a new office tower with ground floor retail space. The remaining two buildings on Lots 11 and 27, on the western part of the site, would be retained and refurbished.

The tower would be 350 ft. high with 26 stories, including ground-floor lobby and retail space, 24 floors of office space, and a mechanical level, plus one basement level. Above the 255 ft. level (about the 19th floor), the building would be set back on all four sides. The street level would contain about 9,900 gross sq. ft. of retail space, and the rest of the tower (exclusive of mechanical space) would contain about 327,250 gross sq. ft. of office space, a total of about 337,150 gross sq. ft. There would be an additional 29,240 gross sq. ft. of space in the two retained buildings (2,200 gross sq. ft. retail and 27,040 gross sq. ft. office). The 8,000 sq. ft. of office space on the ground floor of 640 Sacramento St. (Lot 11), to be retained, may be converted to retail use. The extent of this conversion is not known at

this time. Total office space for the project would be 354,290 gross sq. ft., and total retail space would be 12,100 gross sq. ft., a total floor area ratio (FAR) of 14:1 over the entire site.

The tower's office entrance would be on Montgomery St.; entrances to the ground-floor retail space would be on Montgomery, Sacramento, and Commercial Sts. Access to two off-street loading spaces and a ramp to the basement garage would be on Sacramento St. The garage would contain 23 parking spaces.

B. MAIN ENVIRONMENTAL EFFECTS

- The cumulative impact analyses in this EIR use two different approaches for estimating future transportation, housing, air quality and energy use conditions:
 - the Downtown Plan forecasts to the year 2000, and
 - the March 10, 1984 list of projects in the greater downtown area.
- There are several differences between the two approaches. The basic difference is that the Downtown Plan approach accounts for future changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach uses known projects of certain types to represent future activity and assumes unchanging characteristics and behavior. As a result of this basic difference in approach, the Downtown Plan forecasts incorporate changes over time in employment densities, residence patterns, and travel patterns, whereas the list-based approach applies current conditions to all future activity. These two approaches are alternative means of assessing the future cumulative context for downtown development.

LAND USE AND ZONING

The City Planning Code zoning classification for the site and surrounding area is C-3-0, Downtown Office District. The eastern portion of the site, including Lots 5, 6, 6A, 7, 8, 9, 10 and 28, is in a 400-I Height and Bulk

District, while the western section, Lots 11 and 27, is in a 320-I Height and Bulk District. Project dimensions and gross floor area would meet the 14:1 Floor Area Ratio (FAR) limit and other Planning Code requirements for the site.

HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

The project would demolish eight of the ten buildings on the site. Six of the eight buildings are rated "C", for contextual importance, by the Foundation for San Francisco's Architectural Heritage (in the Splendid Survivors survey, or the later expanded C-3 District survey). The project would preserve two buildings on the site, also rated "C". No site buildings are on the City's List of Architecturally and/or Historically Significant Structures in the Downtown. The older, low-rise buildings to be demolished are part of the context of designated City Landmarks in the project area (such off-site landmark buildings include Jack's, at 615 Sacramento St., and the Old Sub-Treasury, at 608 Commercial St., both across their respective streets from the site).

URBAN DESIGN AND VISUAL QUALITY

The proposed office tower would be visible from street level on Sacramento, Montgomery and Commercial Sts. The two site buildings proposed to be retained, 638-640 Sacramento St. and 653-655 Commercial St., would maintain the scale of these portions of the two streets. The tower would be similar in scale to other structures recently built, under construction, or approved in this portion of the Financial District. It would contrast in scale with the low-rise structures on Commercial St. and Sacramento St. and other development to the west. The project would obstruct views from lower floors of existing or under-construction high-rise buildings, including the Transamerica Pyramid and the Bank of Canton headquarters. From Portsmouth Square, the project would be visible and partially block views of some buildings to the southeast; it would not obstruct any street-level views of the Bay. It would be visible as part of a group of office towers on Montgomery St. between Sacramento and Washington Sts. The project would be visible in the downtown skyline from long-range viewpoints on Nob Hill and Russian Hill; it would not be a major visual focus because of the prominence of other taller structures.

SHADOW AND WIND

The project would increase morning shadows on Portsmouth Square in mid-winter/early-spring and mid-summer/early-fall months. The maximum effect would be from early March to early April and from early September to early October, when the project would shade up to about 40% of the whole square, from about 8 a.m. to 9 a.m. in March/April (from 9 a.m. to 10 a.m. in September/October). (Other portions of the park are, or will be, shaded until about 8:45 a.m. (9:45 a.m. Daylight Savings Time) by existing and under-construction buildings.) The project would add to mid-day shading of Commercial St., fronting the site, and the City Landmark Old Sub-Treasury Building.

The project would increase wind speeds on Commercial St., Sacramento St., and along Montgomery St. The project would not cause any wind speeds to exceed the 11 mph pedestrian comfort criterion. At the northeast corner of Montgomery and Clay Sts., existing northwest wind speeds would be 12.2 mph, and proposed project conditions would be 11.7 mph.

● TRANSPORTATION, CIRCULATION AND PARKING

Cumulative transportation impacts have been calculated by a development-list-based method used in most past San Francisco EIRs and by the new predicted employment-based method first presented in the Downtown Plan Draft EIR, published March 16, 1984. The employment-based model takes into account area-wide housing availability, planned transit system improvements, the effect of congestion on mode selection decisions, and other factors which are expected to change with time, thus giving a more realistic and sophisticated prediction than the list-based method which assumes no changes in modal split or residence patterns of San Francisco workers between now and the year 2000. The two methods are not directly comparable because the employment-based method analyzes C-3 and non-C-3 District trips, while the development list covers only travel from office and retail in the greater Downtown area.

I. Summary

Net new trip generation from the project would be about 4,700 person-trip-ends (pte) per day. About 800 new outbound trips would occur during the p.m. peak period, 500 of these during the peak hour. Using modal splits predicted for the year 2000 by the Downtown Plan Draft EIR, the main peak-period trip contributions would be to Muni - 210 trips, BART - 170 trips, walk only - 130 trips, drive alone - 120 trips and car/vanpool - 130 trips.

The list method predicts 30,000 cumulative peak hour pte/day from the C-3 District in the mid-1990s, about 45% less than the 54,000 pte/day predicted by the employment-based methodology for the year 2000. The list method predicts the greatest impacts to be on Muni (7,800 trips) and BART (4,500 Transbay trips). The employment method also predicts the greatest impact on these two transit systems but predicts relatively more trips on BART (11,800 Transbay BART trips and 5,600 Muni trips). This difference is largely due to differences in the year for which the predictions were made, in San Francisco housing and in roadway/transit capacity availability assumptions between the two methods.

The transit demand from the project would represent about 0.3% of the total transit demand in the year 2000. Cumulative development under the Downtown Plan to the year 2000 would be expected to cause the following changes in transit Levels of Service during the peak period: Muni Northeast Corridor - D to C, BART Transbay - F to E, AC Transit - C to D, Golden Gate Ferry - B to A, Tiburon Ferry - B to C, and CalTrain - B to C. These projections include planned capacity increases of transit carriers.

The proposed project would generate about 200 new pedestrian trips on the surrounding sidewalks during the noon 15-minute peak period and about 140 new pedestrian trips during the p.m. 15-minute peak period. Sidewalk operations, currently in the impeded range on Montgomery St. and Sacramento St. during the noon hour and unimpeded in the p.m. peak hour, would be in the impeded range with the addition of cumulative development, and with the further addition of project pedestrian flows. Crosswalk operations at the Sacramento/Montgomery Sts. intersection would be in the impeded range, during both the noon and p.m. peak hours, with the addition of cumulative development. The addition of project pedestrians to cumulative flows would change the Sacramento St.

crosswalk operation to the lower end of the constrained range during the noon hour.

About 0.2% of year 2000 Bay Bridge peak period demand would be due to the project. About 0.1% of peak-period demand on the Golden Gate Bridge, U.S. 101 (south of Harney Way), and I-280 (between Alemany Blvd. and San Jose Ave.) would be due to the project.

Cumulative development by the year 2000 would be expected to decrease the peak-hour intersection Levels of Service at Battery and Washington Sts. from B to C, and at Battery and Clay Sts. from C to D.

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent less than 1% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in the year 2000 if vehicular demand occurs as projected.

The project would have one 35-ft.-long and one 25-ft.-long off-street loading space, and would meet City Planning Code requirements. It would not meet loading space standards adopted as policy by the City Planning Commission in Resolution No. 9286, which would require three 35-ft. loading spaces for the project.

● AIR QUALITY

Projections of future pollutant emissions and carbon monoxide concentrations under two different approaches to future growth projections (the Cumulative List and the Downtown Plan Draft EIR) vary in the magnitude but not in the type of air quality impacts.

Project-generated traffic and cumulative downtown development traffic would add to regional pollutant emissions. Because nitrogen oxides emissions would exceed hydrocarbon emissions, such development would not increase the Bay Area

ozone concentrations which would otherwise occur. These excess nitrogen oxides emissions could, however, increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. Nitrogen oxides emissions could also lead to violations of the nitrogen dioxide standard or reduce visibility.

Carbon monoxide concentrations at the intersections of Battery and Washington Sts. and Battery and Clay Sts. are projected to be within the ambient standards with project and cumulative development. The effects of emission controls on new vehicles would more than offset the increases in traffic volumes and traffic congestion at these locations.

Emissions of total suspended particulate by project and cumulative development traffic would increase particulate concentrations and could increase the frequency of standard violations.

The project and cumulative downtown development would not directly conflict with the pollution reduction strategies of the 1982 Bay Area Air Quality Plan, nor would it indirectly conflict with the objectives of the Plan.

CONSTRUCTION NOISE

Project construction would increase noise levels in the project vicinity during the 19-month construction period. Pile-driving would not occur. Highest average construction noise levels, about 79 dBA, experienced in offices, stores, and residential uses near the site would interfere with speech. Daytime sleepers could be affected up to a one-block radius. Noise levels at the Chinatown Holiday Inn on Kearny St. at Washington St. would not be expected to interfere with sleeping. The KABL radio station recording studio at 632 Commercial St., across the street from the project site, would not be adversely affected, because the studio is located in the northern portion of the building and does not front the project site.

ENERGY

Annual building energy consumption (at point-of-use) would be about 122,400 British thermal units (Btu) per sq. ft., compared to the 126,000 Btu

performance standard of Title 24 of the California Administrative Code.

Project operation would consume (at-source) about 39 billion Btu of electrical energy and about 2.3 billion Btu of energy from natural gas. Project-generated travel would consume about 17 billion Btu from vehicle fuel.

- Yearly estimated electrical consumption for the projected 19 million square feet of additional office space at the time of buildout (mid 1990s) of the projects on March 10, 1984 list of projected Cumulative Office Development in Downtown San Francisco would be approximately 340 million kWh of power per year. PG&E projects an increase in energy demand over the next decade of about 200 million kWh per year. The lower PG&E estimate is largely due to a lower development estimate.
- The Downtown Plan Draft EIR predicts an increase of about 210 million kWh of electrical consumption per year between 1984 and 1990 and 330-350 million kWh for the years between 1990-2000. PG&E and the Downtown Plan Draft EIR do not predict energy consumption for exactly the same time period and thus are not comparable.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

After completion, the project would accommodate a total of about 1,480 permanent full-time jobs, an increase of 1,220 for the site. About 1,440 additional jobs in the Bay Area would result from the employment multiplier effect of project operation. The project would require about 200 person-years of construction labor. About 310 additional person-years of employment would be generated in the Bay Area, as a result of the multiplier effect of project construction. The project could generate about 130 to 270 new households in San Francisco, and about 560 new households elsewhere in the Bay Area.

According to the City's Office Housing Production Program formula, the project would generate a net demand of 270 housing units in San Francisco.

- According to the Downtown Plan forecast, 189,000 C-3 District workers would live in San Francisco in 2000. The 505 Montgomery project would be a part of this total. About 480 people working in this building would live in San Francisco, about 0.3 percent of the total for the C-3 District.

I. Summary

- According to the list-based approach, about 230,000 workers in the greater downtown would live in San Francisco after build-out of the projects on the list. The 505 Montgomery St. project would account for 0.2% of the total.
- Employment growth accommodated by the project and the many other projects considered in either the Downtown Plan forecast or the list-based analysis has implications for the housing market. These can be summarized as follows:
 - There would be more people with preferences and increased resources to pay for San Francisco housing, adding to an already strong demand.
 - The housing supply would not be expanded to completely match the increased demand, for many local and other housing market reasons.
 - There would be higher prices/rents for San Francisco housing: moderately higher than current levels, or at a minimum, remaining at current levels.
 - Different households would be affected in different ways.
 - Generally, those with fewer financial resources to pay for housing would make the most sacrifices in adapting to more competitive market conditions.
- The regional context for future employment and housing is important in forecasting residence patterns and for assessing housing market implications due to employment growth in one part of the region. Considering trends in labor force participation, workers per household, housing production and employment growth throughout the region, future workers in downtown San Francisco would not require much larger shares of the region's housing stock in the future than they do now. In the future, the relationship between downtown workers and other workers competing for housing in the region would be relatively similar to current conditions. As part of total regional employment growth to the year 2000, increases in San Francisco employment can be viewed as contributing to regional housing demand and to a competitive regional housing market with relatively high housing prices and rents.

I. Summary

The project, after occupancy in 1986, would generate about \$1.18 million annually in total property, payroll, sales, gross receipts and utility tax revenues to the City's General Fund, a net increase of about \$1.03 million.

The project would probably have an initial fiscal benefit to the City. Because revenues would probably increase at a slower rate than costs, as a result of Proposition 13 limitations on property tax increases, cumulative costs of providing services to currently proposed and approved development could eventually overtake the revenues generated. This assumes that no new revenue sources are found, costs of city services increase and the rate of new development declines.

C. MITIGATION MEASURES

Major measures identified that would mitigate potentially significant environmental effects include the following:

URBAN DESIGN AND VISUAL QUALITY

Measures Proposed as Part of the Project

- The project would retain two buildings on the site, 638-640 Sacramento St. and 653-655 Commercial St.; these would maintain the scale of development for these two lots on Commercial and Sacramento Sts.
- The project would include ground-floor commercial uses in the new tower and the retained buildings, fronting Commercial, Montgomery, and Sacramento Sts., to maintain pedestrian interest.

TRANSPORTATION, CIRCULATION AND PARKING

Measures Proposed as Part of the Project

- Should Ordinance 224-81, which would require the sponsor to contribute funds for maintaining and augmenting transportation service in an amount proportional to the demand created by the project, be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted in lieu thereof that are equitable and legal, which the City adopts to apply to all developments which are similarly situated.
- Use of transit facilities would be encouraged by the on-site sale of BART, MUNI, and Golden Gate Transit passes. Carpooling/vanpooling and flex-time would also be encouraged.
- Construction truck traffic would be regulated to avoid peak-hour traffic congestion. Construction activity would be coordinated with other concurrent projects to minimize cumulative traffic effects of lane closures and street excavation.

I. Summary

- The Commercial St. frontage of the project would include improvements proposed in the San Francisco Center City Pedestrian Circulation and Goods Movement Study, to enhance Commercial St. as a pedestrian-oriented street, including decorative striping of the roadway, conformity with no parking on the south side of the street, and sidewalk posts to deter illegal parking. Improvements in the public right-of-way would require approval by the Department of Public Works. The project would include decorative sidewalk paving and street trees along its Commercial St. frontage, in addition to the measures proposed in the Center City Circulation study. The project sponsor would consult with the Bank of Canton, to coordinate design of Commercial St. improvements with those proposed or already completed as part of that project.
- Paving, landscaping and structures in the sidewalk area (subject to Department of Public Works approval) would be designed to minimize interference with pedestrians.
- The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.

Other Measures

- Pacific Gas and Electric Company would coordinate work schedules with other utilities requiring trenching so that street disruption would take place during weekends and off-peak daytime hours (so that area residents would not be disturbed at night). This measure is the responsibility of the CULCOP.
- The loading area could be redesigned to provide three off-street loading spaces, each 35 ft. in length, in compliance with City Planning Commission Resolution No. 9286. The sponsor has rejected this measure because proposed project loading spaces meet existing Planning Code requirements, and because provision of three loading spaces would reduce project frontage on Sacramento St. proposed for retail use.

AIR QUALITY

Measures Proposed as Part of the Project

- During dry-season excavation, unpaved demolition and construction areas would be sprinkled with water to reduce particulate emissions by about 50%.

NOISE

Measures Proposed as Part of the Project

- As recommended by the Environmental Protection Element of the San Francisco Comprehensive Plan, an analysis of noise reduction requirements would be prepared for the project sponsor, and recommended noise insulation features would be included as part of the project.
- The general contractor would construct barriers around the site and around stationary equipment, to reduce construction noise by as much as five dBA.
- The general contractor would, to the extent possible, locate stationary equipment in pit areas or excavated areas which serve as noise barriers.
- Construction activities would be limited to hours between 7 a.m. and 7 p.m.

Other Measures

- To reduce construction noise effects in offices at 632 Commercial St. (KABL Radio), across the street from the site, office uses fronting the street in that building could be relocated to less exposed areas of the building. Alternatively, the project sponsor could pay for covering the Commercial St. windows with plywood, plastic, glass or gypsum board and for gasketing entry doors during project construction. The construction contractor and project sponsor could establish liaison with the building owner and tenants to schedule project construction activities to reduce noise effects in the office space.

These measures are under consideration by the project sponsor. The sponsor would make a decision on measures to be implemented at the start of project construction, in consultation with the building owners and tenants of 632 Commercial St. The decision on the measures would be based on the feasibility of relocation of offices within the building and the potential need to maintain openable windows.

ENERGY

Measures Proposed as Part of the Project

- The project would be more energy efficient than State Title 24 requires. To conserve electrical energy, the project would include multiple light-switching; a variable air volume air-conditioning system; and an outside-air/return-air economizer cycle. A carbon monoxide monitoring system would control garage ventilation to avoid unnecessary operation of fans.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

Measures Proposed as Part of the Project

- The project sponsor would mitigate the net housing demand of 270 units generated by the project, through off-site development or rehabilitation of vacant units in San Francisco, or by providing financial aid to housing development as provided for in the City's Office Housing Production Program.

D. ALTERNATIVES TO THE PROPOSED PROJECT

1. NO-PROJECT ALTERNATIVE

The no-project alternative would retain all existing structures on the site in their present state. Environmental characteristics of this alternative would be the same as with current conditions.

2. DOWNTOWN PLAN ALTERNATIVE

- Alternative 2 would be a project consistent with planning controls proposed in The Downtown Plan - Proposal for Citizen Review, August 1983. The alternative would develop a new structure on most of the site, except for 653-655 Commercial St., at the western end of the site, which would be retained. The
- alternative would use the total allowable 10:1 FAR proposed in the Downtown Plan, or 261,700 gross sq. ft., plus 49,300 gross sq. ft. of additional floor area with Transfer of Development Rights (TDR) from other sites in the C-3-0 District. Total floor area for the alternative, including ground-floor space and 653-655 Commercial St., would be 339,000 gross sq. ft., or a ratio of building area to site area of 12.9:1, compared to 366,390 gross sq. ft. with a 14:1 FAR for the project. The plan proposes a 250-ft. height limit for the site and would permit 25 ft. in additional height in exchange for a reduction in the volume of the upper tower. The alternative would thus be 275 ft. tall, with 19 stories, compared with 350 ft. and 26 stories for the project. The alternative would meet Downtown Plan bulk limits, with setbacks at the 85-ft. level and above 215 ft.

- This alternative would alter the scale of a somewhat larger portion of Sacramento and Commercial Sts. than the project, by demolition of an
- additional low-rise building. The alternative would demolish 638-640 Sacramento St. (Lot 11, to be retained with the project), to allow maximum development of floor area for the site permitted under the proposed Downtown Plan, within the height and bulk limits of the plan. The alternative would be less visible from mid- and long-range viewpoints, because of lower overall height compared to the project, and would cast shorter shadows on Portsmouth Square in mid-winter/early-spring and mid-summer/early-fall mornings than would the project.
 - Transportation, circulation, parking, air quality and energy impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 92% of that of the proposed project.

2A. DOWNTOWN PLAN ALTERNATIVE: NO SHADOW ON PORTSMOUTH SQUARE AT CRITICAL TIMES

- Alternative 2A would be similar to Alternative 2, above, except that the new building would be 250 ft. and 17 stories tall, compared to 350 ft. and 26 stories for the proposed project, and 275 ft. and 19 stories for Alternative 2. Total gross floor area on the site would be about 324,000 gross sq. ft. (a ratio of building area to site area of about 12.4:1), compared to a total of 366,390 sq. ft. for the project, and 339,000 sq. ft. for Alternative 2.

The reduced height of this alternative would result in no new shading of Portsmouth Square after 8 a.m. Standard Time (9 a.m. Daylight Saving Time), between March 21 and September 21, the critical times for solar access to the Square proposed in the Downtown Plan. Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 88% of the proposed project floor area. All other effects would be similar to those of the project.

- 2B. DOWNTOWN PLAN ALTERNATIVE - 10:1 FAR, NO TRANSFER OF DEVELOPMENT RIGHTS

Alternative 2B would be a Downtown-Plan-conforming alternative with a total office FAR of 10:1, the base office FAR proposed in the Downtown Plan. The new building would be 275 ft. and 19 stories tall, compared to 350 ft. and 26 stories for the proposed project. Total floor area on the site would be about 280,700 gross sq. ft. (a ratio of building area to site area of 10.7:1), compared to a total of 366,390 sq. ft. for the project. The alternative would retain buildings at 638-640 Sacramento St. and 653-655 Commercial St., as would the proposed project.

The alternative would be less visible from mid- and long-range viewpoints, because of the lower overall height compared to the project. For the worst-case, the alternative would cast shorter shadows on Portsmouth Square in mid-winter/early-spring and mid-summer/early-fall mornings than would the project. These effects would be similar to those of Alternative 2.

Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 77% of that of the proposed project. All other effects would be similar to those of the project.

3. PROJECT WITH NO PARKING AND WITH LOADING SPACES CONFORMING TO PLANNING COMMISSION RESOLUTION NO. 9286

This alternative would be the same as the proposed project, except that no parking would be provided, compared to 23 spaces in the project. Three off-street loading spaces would be included, compared to two in the proposed project.

The provision of no on-site parking would respond to San Francisco Master Plan Transportation Element policies to discourage new parking within the Downtown Core. Provision of three off-street loading spaces, each 35 ft. in length, would be consistent with the loading space criteria of City Planning Commission Resolution No. 9286, based on the loading space demand formula in the Center City Pedestrian Circulation and Goods Movement Study.

The provision of no on-site parking would reduce project-related vehicular traffic near the site; this would not change Levels of Service at nearby intersections from those projected for the project. The provision of three off-street loading spaces would reduce demand for existing curb loading spaces on the Montgomery St. frontage of the project site. All other environmental effects of the alternative would be the same as those of the proposed project.

● 4. PREFERRED ALTERNATIVE

Alternative 4 would be similar to the proposed project, except that it would be 345 ft. (including a mechanical level) and 25 stories tall, compared to 366 ft. (including a 16-ft. cooling tower) and 26 stories for the project. Total floor area on the site would be about 339,600 sq. ft., for a ratio of total building area to total site area of 13:1, compared to 366,390 sq. ft. and 14:1 for the project.

The alternative would be less visible and would cast shorter shadows than would the project, because of the lower height. Worst-case shadow effects on Portsmouth Square, in March and September, of this alternative would be similar to those of the project at 8:00 a.m. in March (8:48 a.m. in September). At 8:30 a.m. in March (9:16 a.m. in September), the alternative would newly shade about 20% of the square, compared to 30% for the project. At 9:00 a.m. in March (9:48 a.m. in September), the alternative would not shade the square, compared to about 10% for the project.

Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 92% of that of the proposed project. All other effects would be similar to those of the project.

● 5. NEW CONSTRUCTION ON LOTS FRONTING MONTGOMERY STREET ONLY

Alternative 5 would develop a new building on Lots 5, 6A, and 7, the site frontage on Montgomery St. Seven buildings on the remaining lots would be retained. The new building would be 250 ft. and 17 stories tall, and would have a total floor area of 107,250 sq. ft. Site size and design requirements would preclude provision of ground-floor retail space. Total floor area on the site would be about 156,000 sq. ft., for a ratio of building area to site area of 6:1.

The alternative would be less visible and would cast shorter shadows than would the project, because of the lower height and bulk. At 8:00 a.m. in March (8:48 a.m. in September, this alternative would shade the southeasterly corner (less than 5%) of Portsmouth Square. By 8:30 a.m. in March (9:18 a.m. in September) this alternative would not shade the square. The alternative would retain seven C-rated buildings fronting Commercial and Sacramento Sts., compared to two with the proposed project, and would thus maintain the low-rise scale of a greater portion of Commercial St. than the project. Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 40% of that of the proposed project.

II. PROJECT DESCRIPTION

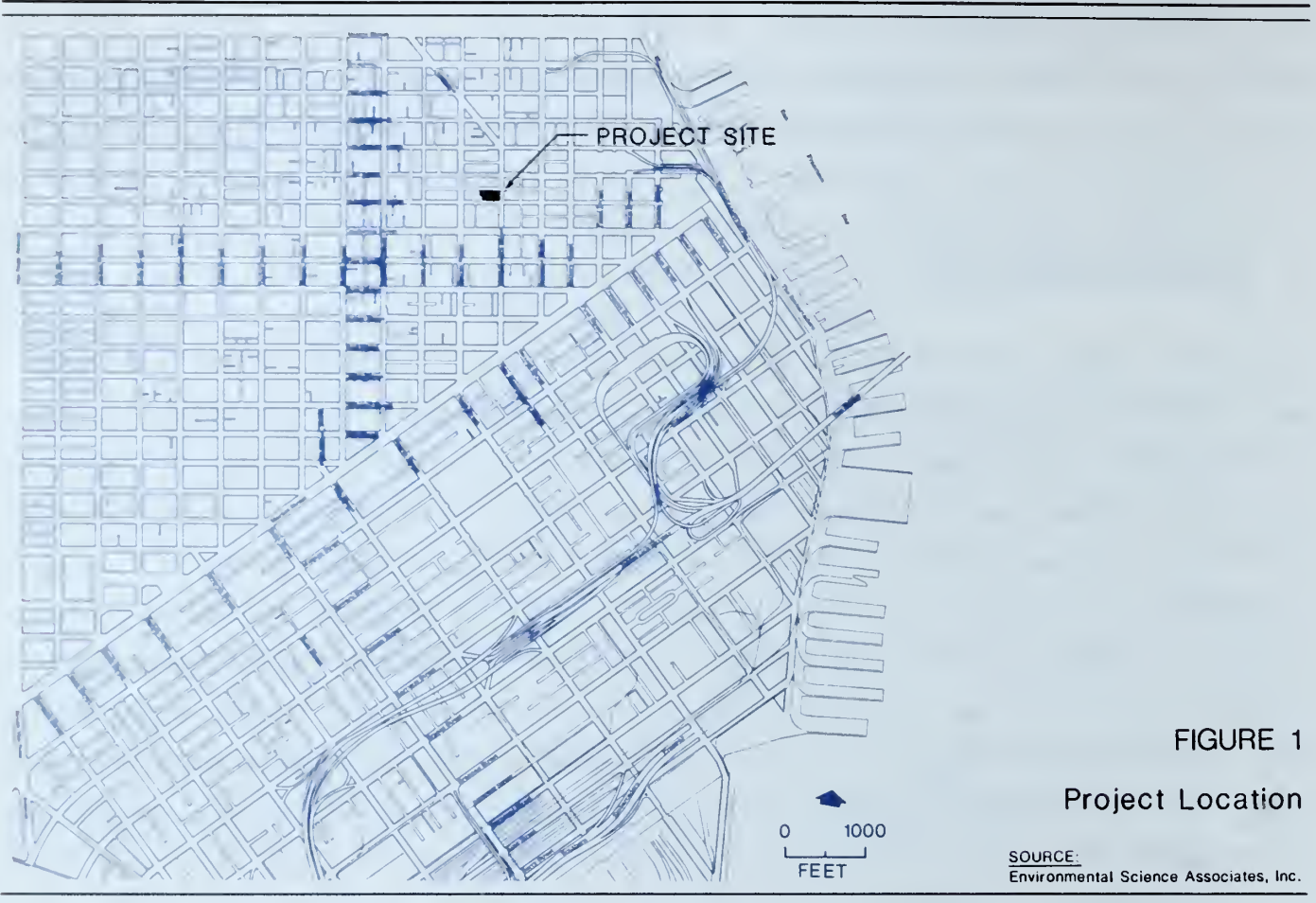
A. SPONSOR'S OBJECTIVES

The Empire Group, of San Francisco, proposes to construct an office building and refurbish the exteriors of two existing buildings, with a variety of street-level retail uses. The sponsor's objectives are to realize a reasonable return on investment through the construction of a high-quality building which would contribute to the vitality of the area and be architecturally compatible with its context, and to preserve the scale of a portion of Commercial and Sacramento Sts. by retaining two buildings on the western portion of the site and using remaining development rights associated with those two buildings, in a new building on the eastern portion of the site. The building is proposed to be energy-efficient. The project architect is Skidmore, Owings & Merrill, of San Francisco.

B. PROJECT LOCATION

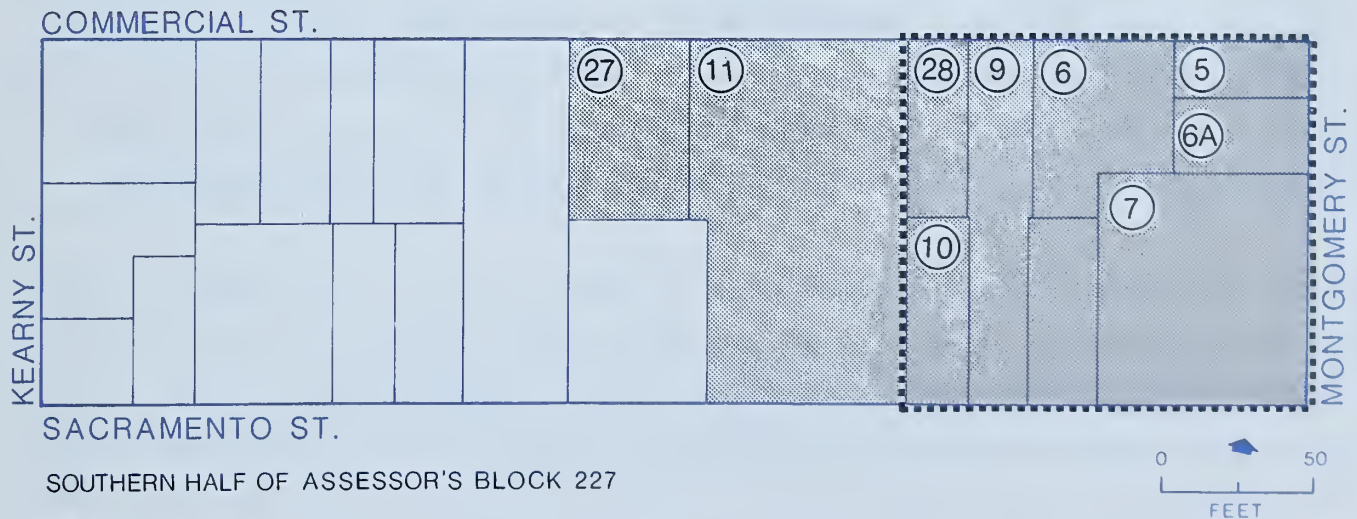
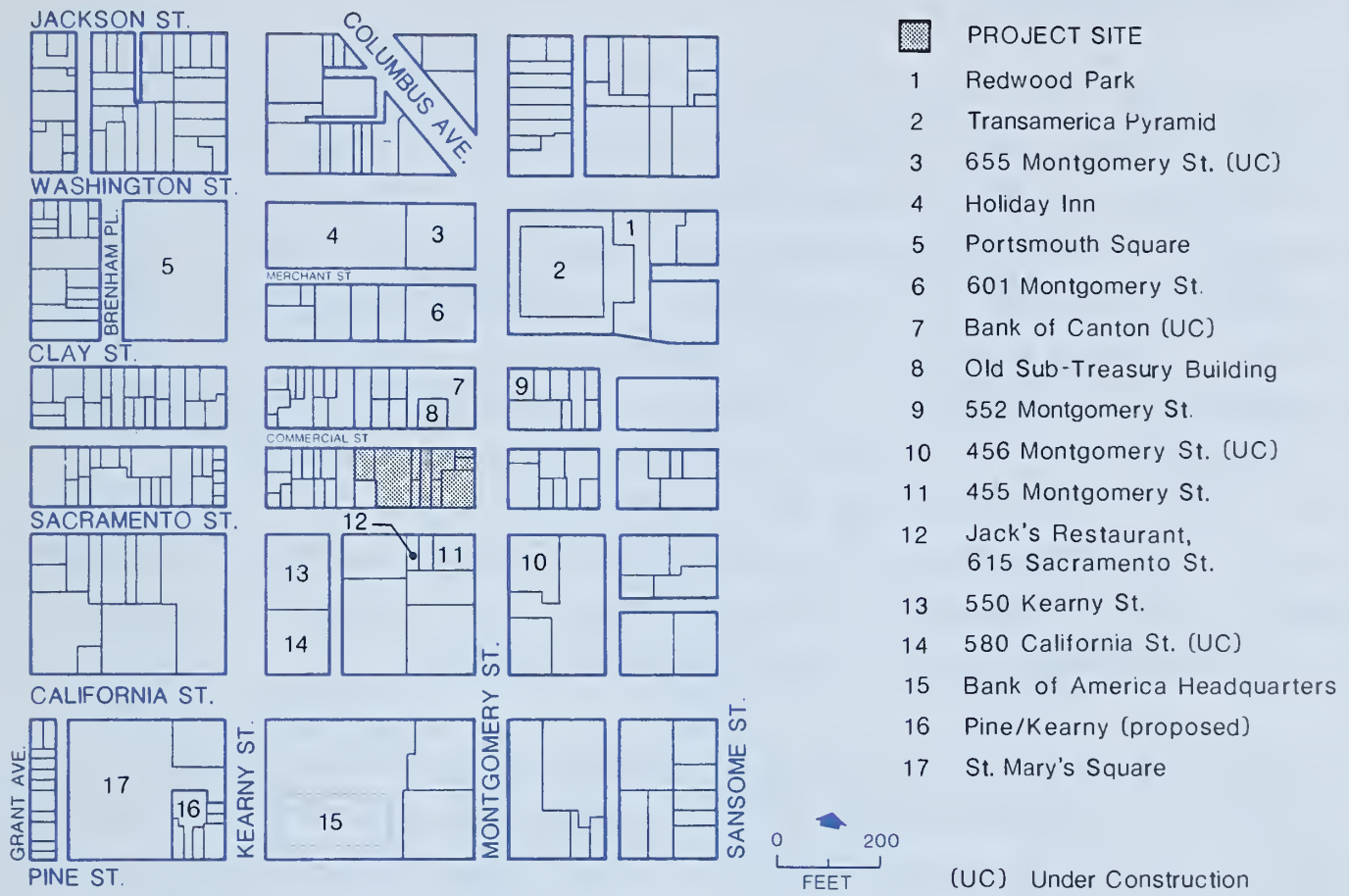
The project site consists of Lots 5, 6, 6A, 7, 8, 9, 10, 11, 27 and 28 in Assessor's Block 227, at the northwest corner of the intersection of Montgomery and Sacramento Sts., City and County of San Francisco (see Figures 1 and 2, pp. 14 and 15). The site comprises about 26,170 sq. ft., and occupies the entire 120-ft. frontage of Montgomery St. between Sacramento and Commercial Sts., as well as frontages of 195 ft. and 241 ft., respectively, on the latter two streets.

The site is located in the northwest portion of the San Francisco Financial District. The northern boundary of the Financial District is Washington St., two blocks north of the project site; the western boundary is Kearny St., one block west of the site, which separates the Financial District and Chinatown. The site is five blocks north of Market St. The Transamerica Pyramid is located one block to the northeast and the Bank of America headquarters is two blocks south of the site. The Bank of Canton headquarters is under construction immediately north of the site (across Commercial St.).



Lower-scale development is located to the west. Other development under formal review, approved, or under construction in the project vicinity is shown on Figure 2, p. 15. The ten existing buildings on the site, ranging from two to four stories, contain retail, banking, restaurant, and office uses.

The site is zoned C-3-0 (Downtown Office). The basic allowable floor area ratio (FAR, the ratio of the buildings' gross floor area to the lot area) in the C-3-0 District is 14:1, for a total allowable floor area for the site of 366,393 gross sq. ft. (based on a site area of 26,170.9 sq. ft.). Lots 5, 6, 6A, 7, 8, 9, 10 and 28 are in a 400-I Height and Bulk District, and Lots 11 and 27 are in a 320-I District. (See Figures 8 and 9, pp. 26 and 27.) The maximum permitted length and diagonal dimension (both applicable above a height of 150 ft.) in the 320-I and 400-I Height and Bulk Districts are 170 ft. and 200 ft., respectively.



LOT 5	527 Montgomery St.	LOT 9	624 Sacramento St.
LOT 6	615-617 Commercial St.	LOT 10	628-630 Sacramento St.
LOT 6A	517-519 Montgomery St.	LOT 11	638-640 Sacramento St.
LOT 7	501-505 Montgomery St.	LOT 27	653-655 Commercial St.
LOT 8	616-618 Sacramento St.	LOT 28	627-629 Commercial St.

FIGURE 2
Project Site and Vicinity

SOURCE.
Environmental Science Associates, Inc

C. PROJECT DESCRIPTION

The eight buildings closest to Montgomery St., on Lots 5, 6, 6A, 7, 8, 9, 10 and 28 (in total, about 15,600 sq. ft. of site area; see Figure 2, p. 15), would be demolished for the construction of the office tower portion of the project, which would include ground floor retail uses. The eight buildings to be demolished include: 527 Montgomery St. (at Commercial St.), a two-story Heritage "C" rated building; 615-617 Commercial St., a two-story "C" rated building; 517-519 Montgomery St., a two-story building; 501-505 Montgomery St. (at Sacramento St.), a four-story building; 616-618 Sacramento St., a three-story "C" rated building; 624 Sacramento St., a two-story "C" rated building; 628-630 Sacramento St., a two-story "C" rated building; and 627-629 Commercial St., a two-story "C" rated building. (See Figures 13-17, pp. 54, 55, 57-59, for photographs of these existing buildings.)

The remaining two buildings, 638-640 Sacramento St. and 653-655 Commercial St., both "C" rated (with about 110 ft. of frontage on Commercial St. and 65 ft. of frontage on Sacramento St.), on Lots 11 and 27 (about 10,570 sq. ft. of site area), would be retained with refurbished exteriors. These two buildings have a floor area of 29,240 gross sq. ft. The remaining developable floor area associated with these two lots (excluding the area of the retained buildings) would be used for new construction on the eastern eight lots. (See Figure 2, p. 15.) The net allowable floor area for the new building would thus be 337,153 gross sq. ft. No floor-area bonuses are being requested.

Project characteristics are summarized in Table 1, p. 17. The project would include a new office tower with ground floor retail space, and two retained buildings (with refurbished exteriors) in office and retail use. The 350-ft.-tall new building would consist of 26 stories, including ground-floor lobby and retail space (see Figure 3, p. 18), 24 floors of office space (see Figure 4, p. 19), and a mechanical floor (26th floor). In addition, it would include a 16-ft. cooling-tower level on the 27th floor, which would be exempt from the height limit, and a basement level. The maximum length and diagonal dimension (above a height of 150 ft.) would be about 120 ft. and 170 ft., respectively. The new building would include 327,250 office gross sq. ft. and 9,900 retail gross sq. ft., for a total floor area of 337,150 gross sq. ft.

TABLE 1: PROJECT CHARACTERISTICS

GROSS SQUARE FEET/a/:	<u>Office</u>	<u>Retail</u>	<u>Total</u>
Existing Buildings Total	53,621	16,872	70,493
Existing Buildings Demolished	-26,581	-14,672	-41,253
Existing Buildings Retained	27,040	2,200	29,240
Proposed New Building	+327,250	+9,900	+337,150
Proposed Total	<u>354,290</u>	<u>12,100</u>	<u>366,390 /b/</u>
Net Change	+300,669	-4,772	+295,897
PROJECT DIMENSIONS:	<u>Permitted</u>	<u>Proposed</u>	
FAR /b/	14:1	14:1	
Height	400 ft.	350 ft./c/	
Maximum Length/d/:	170 ft.	120 ft.	
Maximum Diagonal/d/:	200 ft.	170 ft.	
ON-SITE EMPLOYMENT/e/:	<u>Office</u>	<u>Retail</u>	<u>Total</u>
Existing Buildings Total	210	50	260
Existing Buildings Demolished	-110	-40	-150
Existing Buildings Retained	110	10	110
Proposed New Building	+1,310	+30	+1,340
Proposed Total	<u>1,420</u>	<u>30</u>	<u>1,450</u>
Net Change	+1,200	-10	+1,190
Building Maintenance Staff			+30
Net New Employees			<u>1,220</u>

/a/ Does not include areas exempt from FAR calculations, such as mechanical areas and building storage, parking, and loading.

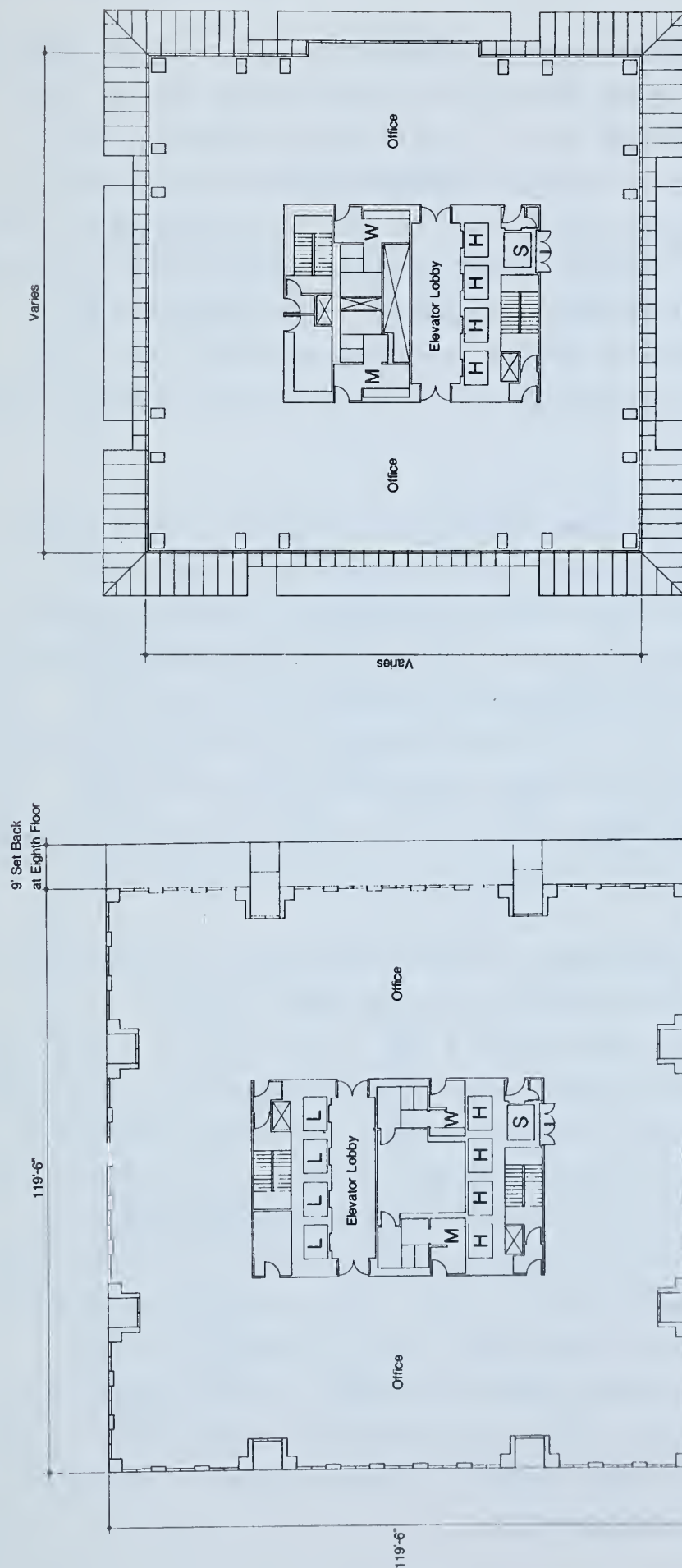
/b/ 14:1 FAR, based on site area of 26,170.9 sq. ft.

/c/ Does not include 16-ft. mechanical penthouse, which is exempt from height limit.

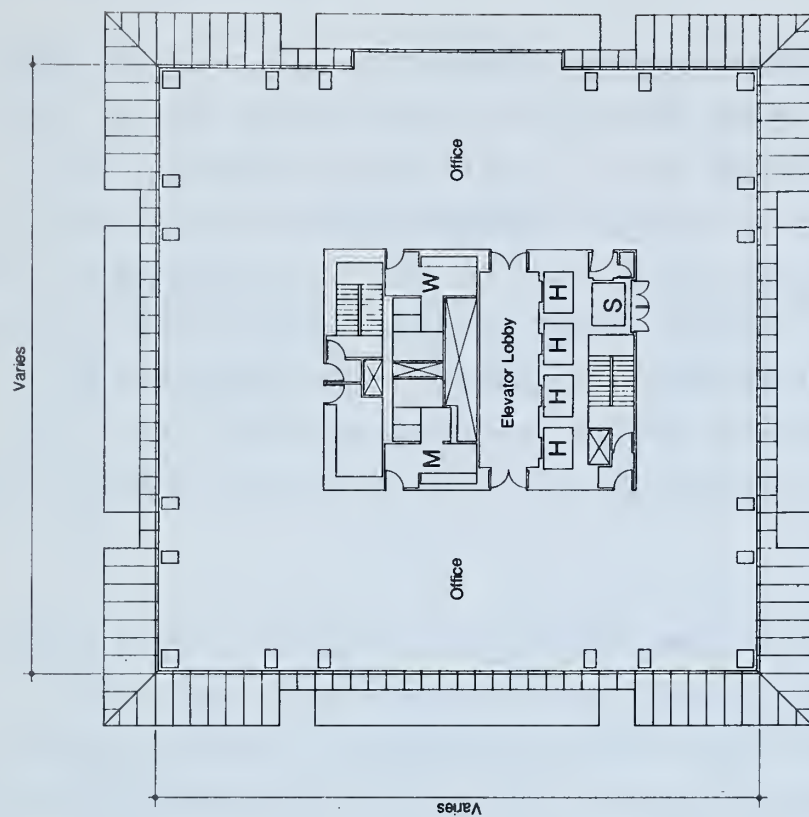
/d/ Applicable above a height of 150 ft.

/e/ Rounded to nearest ten employees; sums of figures do not equal totals due to this rounding.

SOURCE: Environmental Science Associates; The Empire Group;
Skidmore, Owings & Merrill.



TYPICAL LOW RISE PLAN

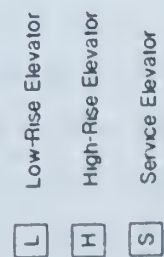


TYPICAL HIGH RISE PLAN

(Floors 20-26 vary in dimension with tapered building profile).

FIGURE 4 Typical Floor Plans

SOURCE:
Skidmore, Owings & Merrill



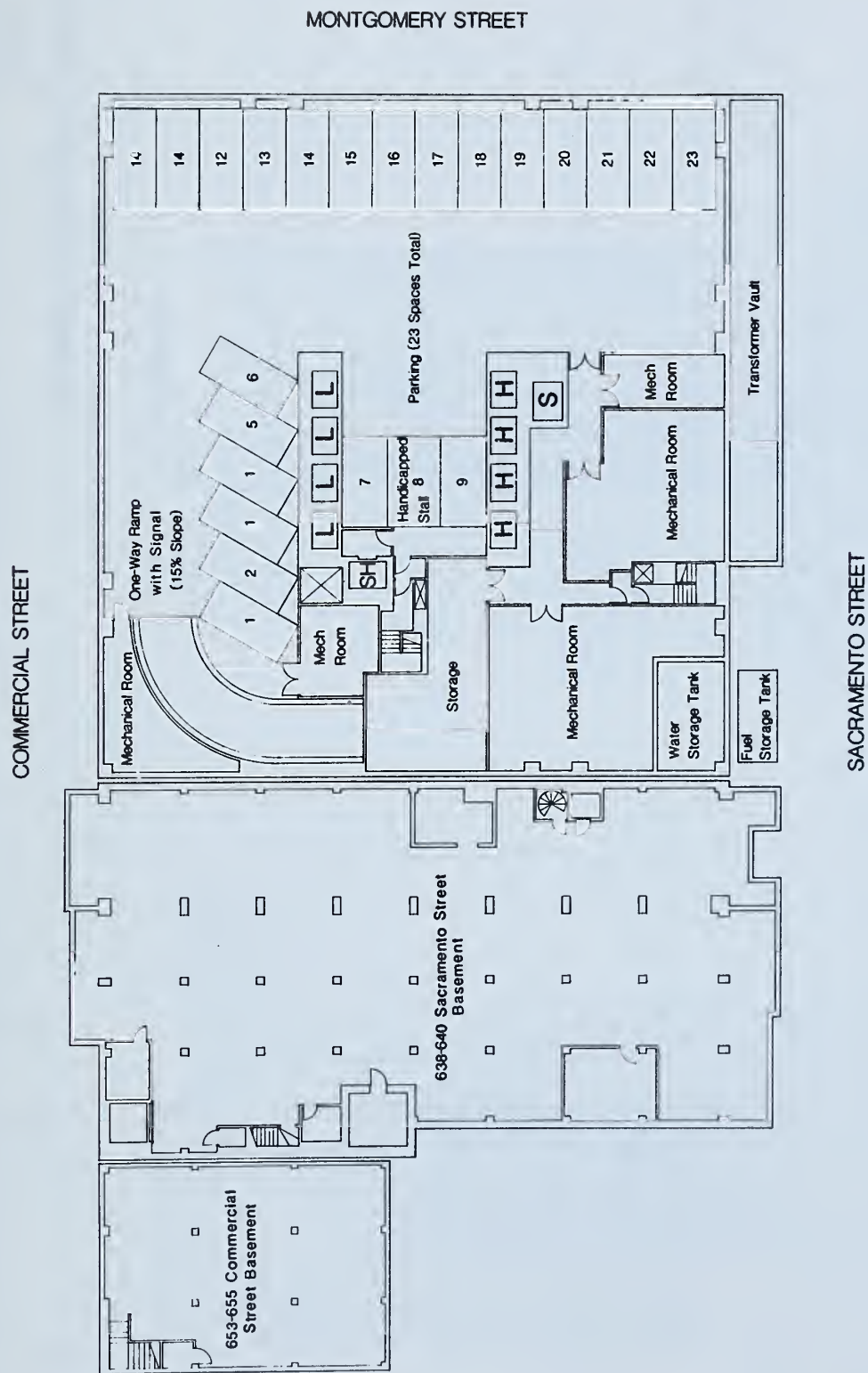
II. Project Description

The two retained buildings would include 27,040 office gross sq. ft. and 2,200 retail gross sq. ft., for a total floor area of 29,240 gross sq. ft. Thus, there would be a total of 354,290 sq. ft. of office and 12,100 sq. ft. of retail use on the site. The net changes in floor area for the entire site would be an increase of 300,669 office gross sq. ft. and a decrease of 4,772 retail gross sq. ft., or an increase of 295,897 total gross sq. ft. A portion of the ground-floor space at 638-640 Sacramento St. (641 Commercial St.), which is currently in office use, would be converted to retail use. The extent of this conversion is unknown at this time and is not reflected in the above numbers.

The ground floor of the proposed new building would include a 35-ft. and a 25-ft. loading dock, garbage storage, and the entrance/exit ramp for a

- basement parking garage, with access from Sacramento St. Separate storage facilities for reusable material would be provided. A basement level would include parking for 23 vehicles, along with mechanical and electrical equipment (see Figure 5, p. 21). It is not known at this time how project parking spaces would be allocated between long-term or short-term use. Project fuel storage and transformer vaults would extend under the Sacramento St. sidewalk.

The new building would be a three-part vertical composition consisting of a base lobby and retail level, an office mid-section and a sloped office/mechanical top section (see Figures 6 and 7, pp. 22-23). A 70-ft.-high office entry portal, and retail space, would front Montgomery St. The inset building entrance would be faced in grey granite. The ground-floor entry lobby would contain ornamentation and artwork. It would not have entrances to the retail spaces. The ground-floor retail space fronting Montgomery St. would be set back one foot from the property line to define the entry portal and enlarge the sidewalk (see Figure 3, p. 18). The project would be built to lot lines on Commercial and Sacramento Sts., with the remainder of the ground-floor retail spaces fronting these two streets. Medium-toned stone, with darker stone elements, and tinted, non-reflective windows would be the facade materials on the first three levels. An inset detail at the third level would establish the base element.



- [L] Low-Rise Elevator
- [H] High-Rise Elevator
- [S] Service Elevator
- [SH] Shuttle Elevator



FIGURE 5
Basement Plan

SOURCE:
Skidmore, Owings & Merrill

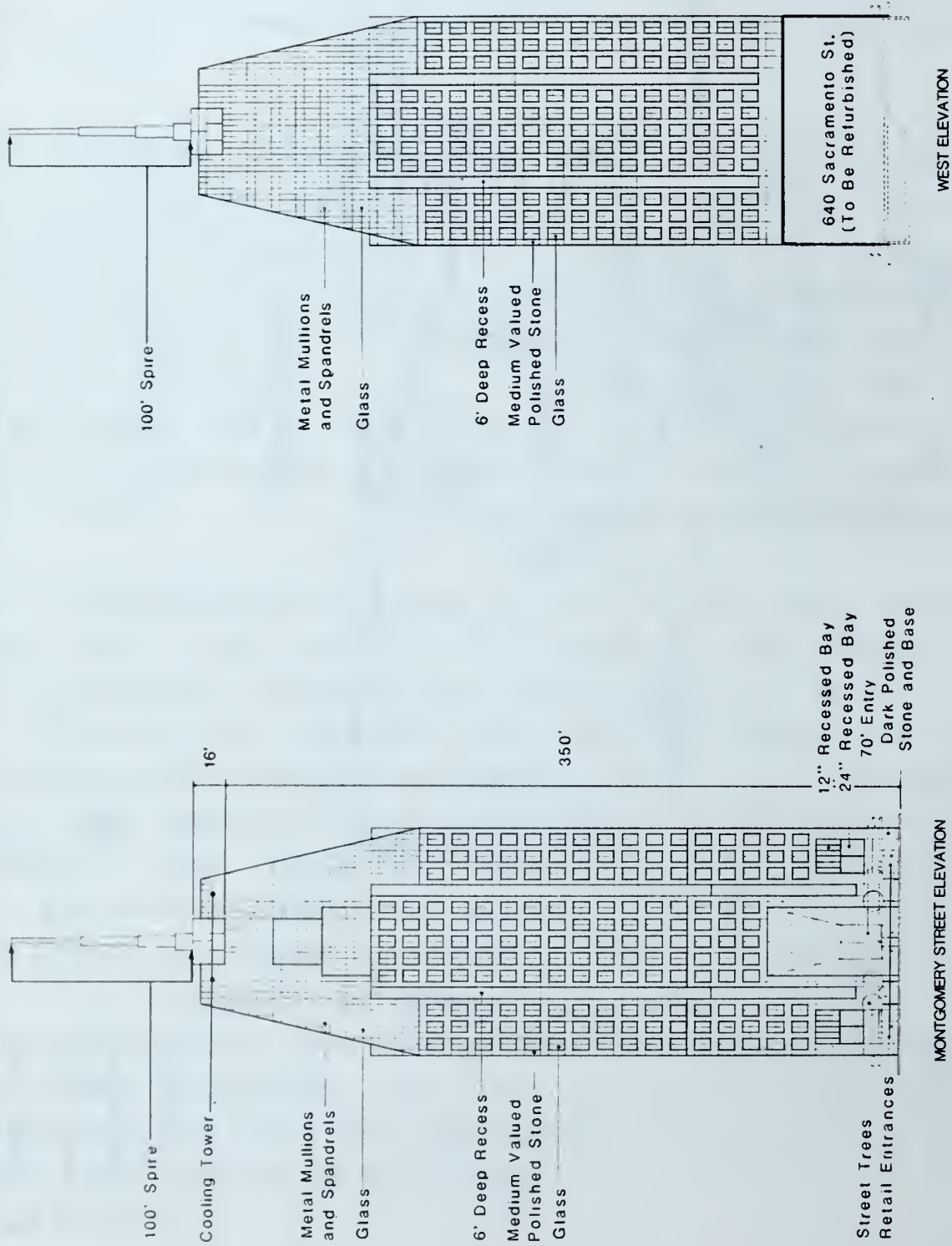
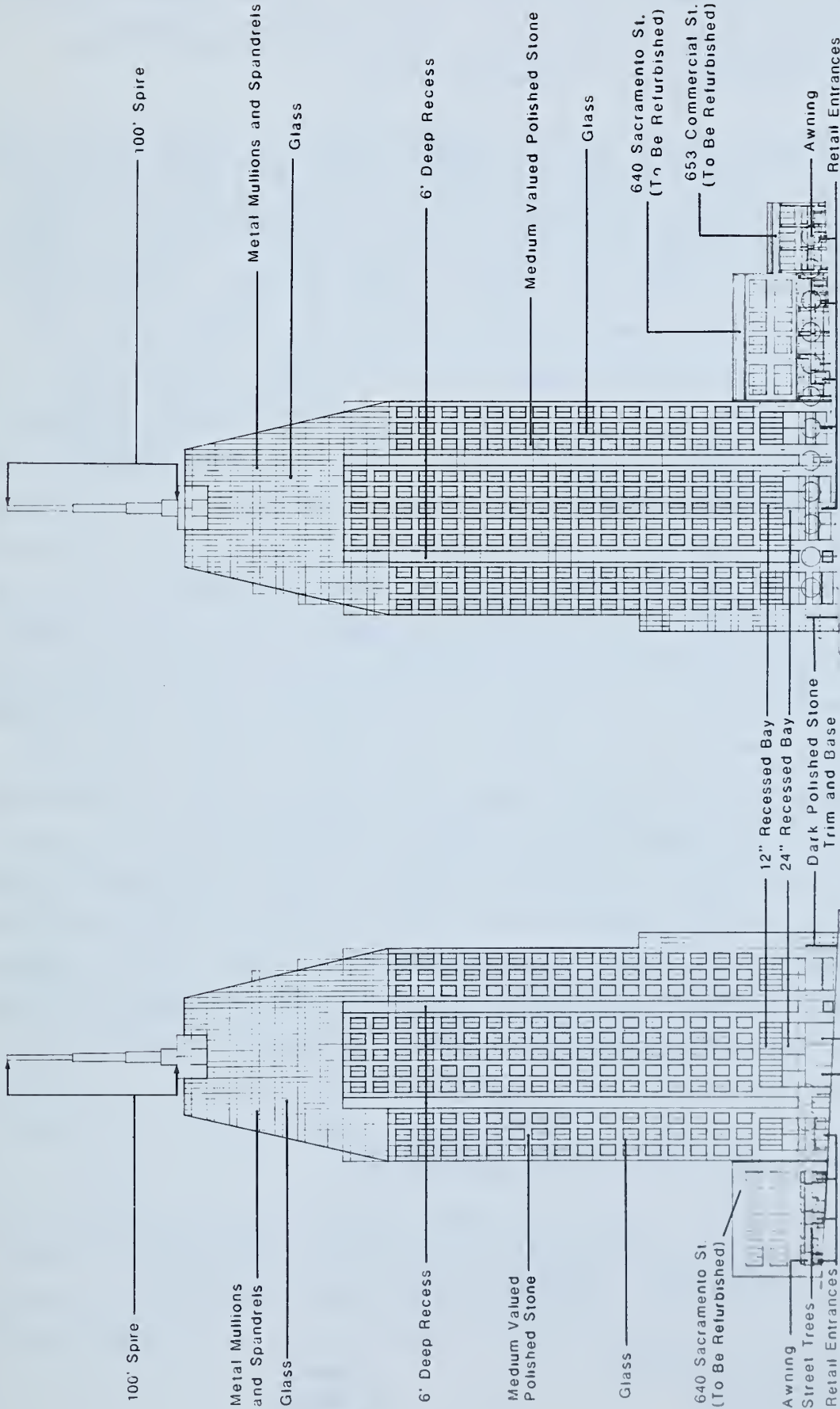


FIGURE 6

Montgomery Street and West Elevations

SOURCE:
Skidmore, Owings & Merrill





COMMERCIAL STREET ELEVATION

FIGURE 7

Sacramento Street and Commercial Street Elevations

SOURCE:
Skidmore, Owings & Merrill

II. Project Description

The project's office mid-section would extend to a height of 255 ft. (the 19th floor), approximately the height of the first setback on the neighboring Bank of Canton headquarters (under construction). The facade would include medium-tone stone, and tinted, non-reflective glass.

The top section of the building, above the 255 ft. level, would be set back in a tapered profile. The office portion of this top section would be sheathed in glass and metal; the mechanical level and the cooling tower, both of which would be located above the 25th floor, would be faced in metal. The building would terminate with a 100-ft. metal spire. Two vertical notches would run the height of the building on each facade, up to the 255-ft. (19th floor) level. The notches, about 30 ft. from the corners, would be about six ft. deep and six ft. wide. Above the eighth floor, there would be a nine-ft. setback on the Montgomery St. facade.

- The facades of the existing buildings to be retained are intended to be refurbished to be consistent with the context of Commercial St. Final design of the facade of the new building is also intended to be compatible with older development on Commercial St. A portion of the ground-floor space at 638-640 Sacramento St. (641 Commercial St.), which is currently in office use, would be refurbished and converted to retail use. The extent of this conversion is unknown at this time; it would depend on further investigation of the condition of the building and of potential effects on tenant displacement. It might be possible to convert some space to retail use without displacing the existing office tenants, by reallocating the remainder of the building space. No other rehabilitation of the buildings is proposed. The retained buildings would be related to the new building by sidewalk treatment and landscaping.

D. PROJECT SCHEDULE, COST, AND APPROVAL REQUIREMENTS

The project sponsor expects project review and detailed design to be complete by early 1984. The construction schedule is planned as follows:/1/

- | | |
|----------------------------------|----------|
| - Demolition and Site Clearance: | 6 weeks |
| - Excavation and Shoring: | 12 weeks |
| - Foundation Preparation: | 8 weeks |

II. Project Description

- Steel Erection: 12 weeks
- Exterior Finishing: 22 weeks
- Interior Finishing: 22 weeks
- Initial Occupancy: 82 weeks after construction start.

The refurbishing of 638 Sacramento St. and 653 Commercial St. would be completed during exterior finishing of the project tower. Project development costs would be about \$72 million in 1983 dollars, including \$30 million for construction./2/ Office space is expected to rent for an average of \$35 per square foot per year (in 1983 dollars).

- Following public review and a public hearing on this EIR, the City Planning Commission must certify the EIR as complete, accurate and objective. Under Ordinance No. 54-84, the Commission would then review the building and its environmental context as a Conditional Use, and adopt a resolution approving, approving with conditions, or disapproving the project. Upon project approval, the project sponsor would obtain demolition, encroachment (for sidewalk vaults and improvements in the public right-of-way), site, building, fire, electrical, and related permits from the Central Permit Bureau of the Department of Public Works.
- Ordinance No. 54-84, adopted by the Board of Supervisors on February 3, 1984, implements temporary interim controls on permit approvals. These controls prohibit approval of applications for office or tourist hotel developments of more than 50,000 net new gross sq. ft. in the C-1, C-2, C-3, C-M, M-1 and M-2 use districts. These interim controls are effective until August 25, 1984, or until permanent controls are signed by the Mayor, whichever is sooner. The purpose of the ordinance is to limit new development during review and adoption of planning controls deriving from the proposed Downtown Plan, Proposal for Citizen Review, August 1983.
- The ordinance includes certain exceptions to the interim controls. Among these are projects for which, prior to August 25, 1983, a building permit application had been filed, and a preliminary draft environmental impact report submitted to the Department of City Planning. The 505 Montgomery St.

II. Project Description

project falls within this category, and may be approved (during the period of interim controls) under Conditional Use procedures. The ordinance requires consideration by the City Planning Commission of this Conditional Use authorization in light of the rules and guidelines in the proposed Downtown Plan governing height, bulk and setbacks; offstreet loading facilities; building appearance; open space; sunlight access; pedestrian circulation; streetscape; and preservation of architecturally significant and contributory buildings.

NOTES - Project Description

/1/ Theodore W. Smith, Dinwiddie Construction Co., letter, March 21, 1983.

/2/ Martin Brown, The Empire Group, letter, April 29, 1983.

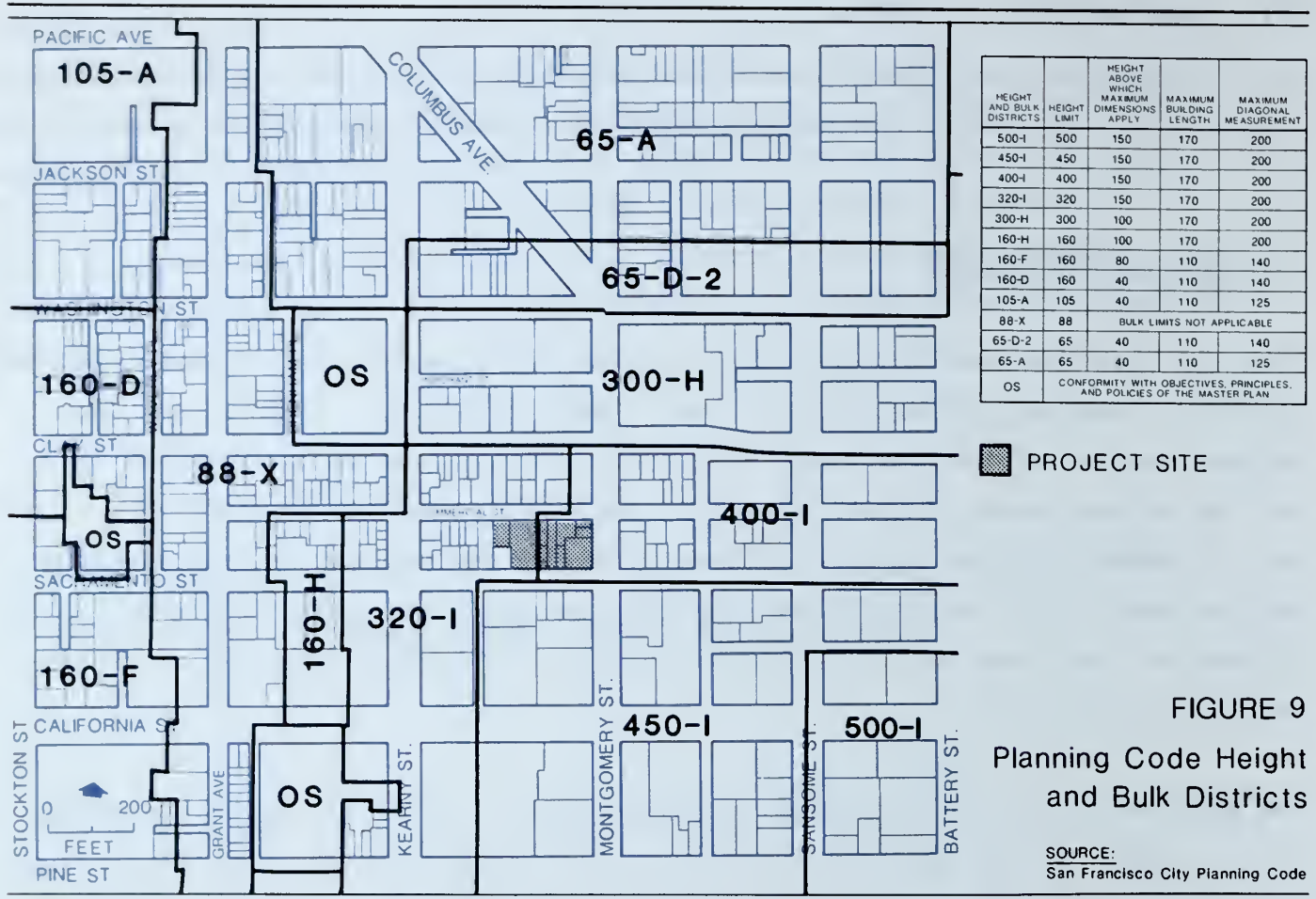
III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

The City Planning Code zoning classification for the site and surrounding area is C-3-O, Downtown Office District (see Figure 8, below). Office uses and related retail and service uses, with a basic Floor Area Ratio (FAR) of 14:1, are the primary uses in this district. Wholesale, residential, and entertainment uses are also permitted. The 14:1 FAR allows buildings with a maximum total floor area 14 times the total area of the site. The total allowable floor area for the 26,170.9-sq.-ft. site would, thus, be 366,393 gross sq. ft.

The eastern portion of the site, including Lots 5, 6, 6A, 7, 8, 9, 10 and 28, is in a 400-I Height and Bulk District, while the western section, Lots 11 and 27, is in a 320-I Height and Bulk District (see Figure 9, p. 27). In both





districts, the maximum permitted building length is 170 ft., and the maximum permitted diagonal measurement is 200 ft., both above a height of 150 ft.

South of Sacramento St., directly across the street from the site, the height limit is 450 ft. Two blocks north of the site is a 65-D-2 District. In this district (part of the C-2, Community Business District), the height limit is 65 ft., with height exceptions to be approved by the City Planning Commission (by conditional use authorization), not to exceed 200 ft. The district is intended to maintain a visual transition from the high-rise buildings of the Financial District to the lower three- and four-story buildings in the Jackson Square Historic District to the northeast, and on Telegraph Hill and in North Beach to the north. Just south of the 65-D-2 District, the height limit is 300 ft. West of Kearny St., height districts in the project area include 160-ft. and 88-ft. limits. Also located nearby are St. Mary's and Portsmouth Squares, with Open Space Height and Bulk Districts./1/ Land use in the project area is shown in Figure 10, p. 28.

NOTE - Land Use and Zoning

/1/ City and County of San Francisco, Chapter 11 of the San Francisco Municipal Code, City Planning Code, Sec. 263.1.



FIGURE 10

* Includes restored Old Sub-Treasury Building with proposed Pacific Heritage Museum

Land Use in Project Vicinity

SOURCE:
Environmental Science Associates, Inc.

B. HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

PROJECT SITE

The project site contains ten, two- to four-story structures built between 1906 and 1950 as listed below, in order of date of construction./1/ The architectural characteristics of these individual buildings are discussed in Section IV. Environmental Impact, pp. 53-60. None of the buildings is on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown./2/ Eight of the buildings are rated "C" by the Foundation for San Francisco's Architectural Heritage (Heritage). (Buildings were rated from a high "A" to a low "D".) Buildings rated "C" are recognized by Heritage to be of contextual importance; these buildings "are distinguished by their scale, materials, compositional treatment, cornice and other features."/3/ Such buildings establish the setting for more important buildings and add visual diversity and architectural character to the downtown area.

527 Montgomery St. is rated "1" and 627-629 Commercial St. is rated "0" in the Department of City Planning architectural survey; the other site buildings are not rated. (For a description of the surveys, list and rating systems, see Appendix B, pp. A-25 to A-26.) Architectural and historic resources on the site and in the project vicinity are mapped on Figure 11, p. 30. The buildings on the site contribute to the architectural context for nearby City Landmarks and National Register buildings, discussed below.

● TABLE 1A: ARCHITECTURAL RESOURCES ON PROJECT SITE

<u>Building</u>	<u>Architect</u>	<u>Construction Date</u>	<u>Heritage Rating</u>	<u>DCP Survey Rating</u>
527 Montgomery St.	Unknown	1906	C	Not Rated
616-618 Sacramento St./a/	William Mooser & William Milwain	1907	C	Not Rated
638-640 Sacramento St. (641 Commercial St.)	A.A. Cantin	1907	C	Not Rated
615-617 Commercial St.	Unknown	1907	C	1
627-629 Commercial St.	Charles C. Frye	1910	C	0
628-630 Sacramento St.	Kittle Constr. Co.	1910	C	Not Rated
624 Sacramento St.	Unknown	1920	C	Not Rated
653-655 Commercial St.	James H. Hjul	1923	C	Not Rated
501-505 Montgomery St.	Unknown	1950	Not Rated	Not Rated
517-519 Montgomery St.	Unknown	1950	Not Rated	Not Rated

/a/ Originally known as Mergenthaler Linotype Building.

SOURCE: Foundation for San Francisco's Architectural Heritage

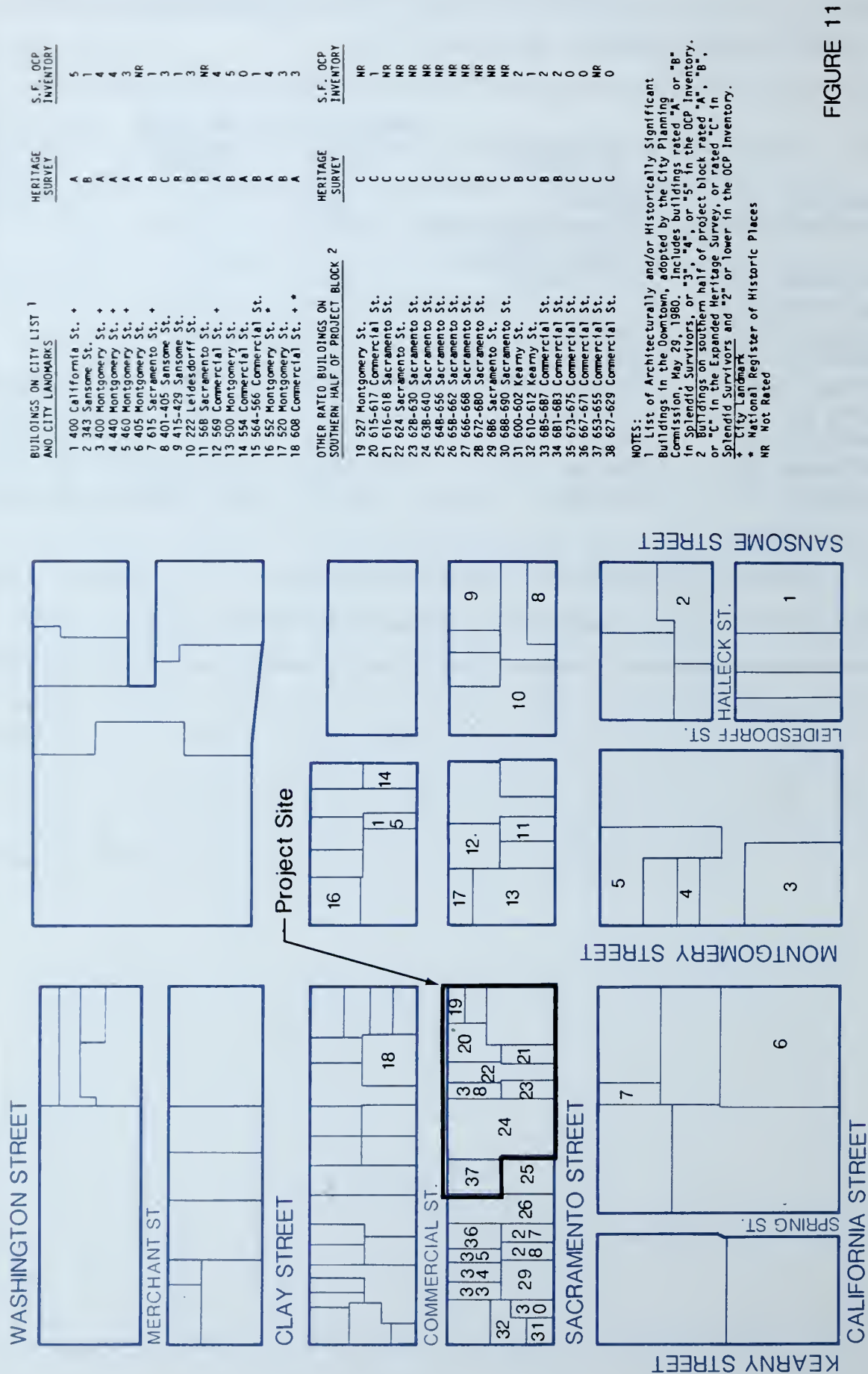


FIGURE 11

Architectural and Historic Resources in Site Vicinity

SOURCE:
Environmental Science Associates, Inc.

SITE VICINITY

Buildings in the vicinity of the project site include designated City Landmarks, buildings listed on the National Register of Historic Places, and buildings on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown (see Figure 11, p. 30). They are discussed in order of significance and proximity.

- The 18-story Bank of Canton of California headquarters building is under construction at the intersection of Montgomery and Commercial Sts., directly north of the project site. That project will restore and incorporate the Old Sub-Treasury Building at 608 Commercial St., a City Landmark, listed in the National Register of Historic Places, and rated "A". The Kohl Building at 400 Montgomery St., a City Landmark and "A" rated, is located one block south of the project site on Montgomery St. It is the only high-rise building in the Financial District to have survived the 1906 earthquake and fire with only minor damage. The 24-story, 456 Montgomery St. building, under construction at the southeast corner of Sacramento and Montgomery Sts., will incorporate the facades of two City Landmarks: the Sutro and Co. Building (460 Montgomery St.) and the Borel and Co. Bank Building (440 Montgomery St.), both of which are "A" rated. PG&E Station J at 569 Commercial St., one block east of the site, is a City Landmark and "A" rated. The Jack's Restaurant building at 615 Sacramento St., directly south of the project site, is a City Landmark and "B" rated. The 552 Montgomery St. building, one-half block north of the project site, is listed on the National Register of Historic Places and rated "A".

Other buildings in the area on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown include the "A" rated Financial Center Building, located one block south of the project site at 405 Montgomery St. Directly across from the project site are the "B" rated Asian American Bank Building at 500 Montgomery St., and the "B" rated 520 Montgomery St. building. Both buildings are clad in glazed terra cotta and have modified temple fronts without pediments.^{/4/} The Corinthian pilasters^{/5/} of the 520 Montgomery St. building continue the Ionic columns of the Asian American Bank Building and the Tuscan order of the Sutro Co. Building (460 Montgomery St.).

Four "B" and eight "C" rated one- to four-story buildings, none included on the City's list of significant structures, are located on Sacramento, Kearny, and Commercial Sts. on the western portion of the project block. All but three of the buildings on the southern half of Block 227, which contains the site, are rated by the two Heritage surveys. Eight are rated by the DCP survey. (See Appendix B, pp. A-25 to A-26.)

NOTES - Historic, Architectural and Cultural Resources

/1/ Raybern and Company, Inc., 1982, The San Francisco Realty Index, 1982-83 Edition.

/2/ San Francisco City Planning Commission Resolution No. 8600, May 29, 1980.

/3/ Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors, California Living Books, San Francisco, p. 13.

/4/ A pediment is the triangular face of a roof gable.

/5/ A pilaster is a column-like decoration of shallow depth.

C. URBAN DESIGN AND VISUAL QUALITY

The project site is near the boundary between the high-rise buildings of the Financial District to the east and south, and the low-rise structures of Chinatown to the west. The project site is also between the two tallest buildings in San Francisco, the 52-story Bank of America Headquarters two blocks south of the project site at Kearny and California Sts., and the 48-story Transamerica Pyramid, one block north of the site on Montgomery St. between Clay and Washington Sts.

Most buildings in the project vicinity are built to lot lines, forming continuous street frontages which define the gridiron street pattern of the Financial District. The major open spaces in the area are the Bank of America Plaza at California and Kearny Sts. (about two blocks south of the project site), the Transamerica Pyramid's Redwood Park at Clay and Leidesdorff Sts. (about two blocks northeast of the site), Portsmouth Square on Kearny St. between Clay and Washington Sts. (about two blocks northwest of the site), and St. Mary's Square between Pine and California Sts. west of Kearny St. (about three blocks southwest of the site).

III. Environmental Setting

Commercial St., between Montgomery and Kearny Sts. in the project block, is characterized by small-scale, one- to four-story commercial structures. The 22-ft.-wide street, narrower than Sacramento or Montgomery Sts., provides a small-scale character in this portion of the Financial District, west of the

- 18-story Bank of Canton headquarters, under construction, and a means of access between Chinatown and the Financial District. (See Figure 12, p. 34.)

New buildings on Montgomery St. in the project block and one block south and north (Bank of Canton, 456 Montgomery St., and 655 Montgomery St.) will extend high-rise development along Montgomery St. High-rise buildings on Montgomery St. define the main center of the Financial District, south of Sacramento St., with smaller-scale buildings on the east side of Montgomery St. between Sacramento and Clay Sts. North of Clay St., high-rise buildings continue to Washington St.

Looking to the western end of Commercial St. from the site, the view terminates uphill at Grant Ave. in Chinatown. Looking east on Commercial St., the view extends to the Ferry Building (framed between the Embarcadero Center towers); this is the only San Francisco street other than Market St. where this occurs. In views north from the corner of Sacramento and Montgomery Sts. up Montgomery St., the Bank of Canton headquarters will partially block the existing view of the 19-story 601 Montgomery St. building; there will still be a view of Telegraph Hill to the north. In views west of the site, from the northwest corner of Commercial and Montgomery Sts., the small-scale structures of Chinatown on the eastern slope of Nob Hill form a background for the site. Looking south and east toward the site from Portsmouth Square or Nob Hill, views include high-rise buildings of the Financial District, with smaller-scale buildings in the foreground.

No long-range views of San Francisco Bay or other parts of the City other than the Financial District are available from the existing buildings on the site. The project site is not visible from long-range view points to the west or south (i.e., Twin Peaks and Potrero Hill), because of intervening high-rise structures. The existing on-site structures are generally not visible from locations beyond the buildings and streets in the immediate project vicinity.



① 527 Montgomery St.

② 615-617 Commercial St.

③ 624 Sacramento St. (Entrance on Sacramento St.)

④ 627-629 Commercial St.

⑤ 638- 640 Sacramento St.

⑥ 653-655 Commercial St.

FIGURE 12

View East,
From Mid-block Commercial Street

SOURCE:
Environmental Science Associates, Inc.

D. SHADOW AND WIND

SHADOW

Existing structures on the site cast shadows on streets and sidewalks in the project vicinity. Portions of Commercial and Montgomery Sts. within one block of the project site are shaded at different times of day in all seasons of the year. Existing and project shadow patterns for various times of the day and year are discussed in detail in Section IV. Environmental Impact, pp. 71-87.

WIND

Wind conditions in San Francisco partially determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, flat-walled high-rise buildings can funnel wind into narrower areas, increase air speed and turbulence, and divert winds downward to street level.

U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly (i.e., from the west), southwesterly, and northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco./1/ On an aggregate basis, west winds blow approximately 52% of the time. West winds are also the strongest, averaging about seven miles per hour (mph), exceeding 12 mph 6% of the time.

Southwesterly winds are typically the second most frequent (about 14% of the time) and second strongest winds, averaging seven mph and exceeding 12 mph about 2% of the time. Northwesterly winds have had the second highest average speed during some years, though they generally occur 6-8% of the time, averaging five mph, and rarely exceeding 12 mph.

Average wind speeds are highest during summer and lowest during winter months. However, the strongest peak winds occur during the winter, when average speeds of 27 mph or more for one hour have been recorded. The highest average wind speeds are in the mid-afternoon, and the lowest are in the early morning. Peak wind speeds are distributed evenly throughout the day.

NOTE - Shadow and Wind

/1/ The U.S. Weather Bureau data were collected from 1891 to 1930 at 465 California St., near Montgomery St., about one block south of the site. The Bay Area Air Quality Management District data were collected in the mid-1970's at 939 Ellis St., near Van Ness Ave., about 1.8 miles southwest of the site. (The BAAQMD station is now at 900 23rd St.)

E. TRANSPORTATION, CIRCULATION AND PARKING

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p. 14). Access to the freeways connecting with the East Bay, San Francisco International Airport and the Peninsula is provided by pairs of ramps about 1,500 ft. to the northeast (Washington and Clay Sts. at Davis St.), and about 1,400 ft. to the northeast (Broadway at Sansome and Battery Sts.).

The site is within the Downtown Core automobile control area designated in the Transportation Plan of the Transportation Element of the San Francisco Master Plan./1/ The Plan calls for reducing the impact of private commuter vehicles and excess automobile traffic in the Downtown Core, by not providing new parking within the core.

In the vicinity of the project site, Columbus, Montgomery, Kearny, Sansome and Clay Sts. are designated in the Downtown Transportation Plan as transit preferential streets on which priority is given to transit vehicles over autos during commute and business hours on weekdays./1/ Washington, Clay, Columbus, Montgomery, and Kearny Sts. are designated as primary vehicular streets, which the Master Plan defines as "major routes for automobile and truck movements into and out of the downtown area."

Montgomery St. is one-way southbound and carries three lanes of traffic between Clay and Sacramento Sts. Kearny St. is one-way northbound, with four traffic lanes between Clay and Sacramento Sts. Sacramento St. is one-way westbound and carries three lanes of traffic between Montgomery and Kearny Sts. Commercial St. is a one-lane, one-way westbound street. The intersection of Montgomery and Sacramento Sts. is controlled by a fixed-time traffic signal.

III. Environmental Setting

The site is served by San Francisco Municipal Railway (Muni) electric trolley and motor coach lines, providing radial service to and from the downtown area. Muni Metro light rail vehicle lines are accessible via the Embarcadero Station (2,200 ft. southeast of the project site) and the Montgomery Station (2,400 ft. south of the project site) of the Market St. subway. Muni and BART routes in the project vicinity are shown in Figure 35, p. 95. Appendix D, Table D-1, p. A-43, shows the existing p.m. peak-hour conditions on the Muni and other transit systems.

Regional transit service to the site is provided to and from the East Bay by the Bay Area Rapid Transit District (BART) at the Embarcadero and Montgomery Stations on Market St., and by AC Transit motor coaches at the Transbay Transit Terminal, located on Mission St. at First St., 3,500 ft. southeast of the project site.

Service to the Peninsula is provided jointly by CalTrans and the Southern Pacific Transportation Company (SP) from a train terminal at Fourth and Townsend Sts.; by the San Mateo County Transit District (SamTrans) from bus routes and stops along various streets in the area, primarily on Mission St. west of First St. (SamTrans Route 7A runs south on Montgomery St., as part of a peak-period route to San Mateo and Foster City, with stops on Montgomery St. at Clay and at California Sts.); and by BART, which provides transfers to SamTrans routes at the Daly City BART Station. Independently owned and operated jitneys provide service along the entire length of Mission St. (from The Embarcadero to Daly City) during a.m. and p.m. peak hours.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides a.m. and p.m. peak-period bus service to Marin and Sonoma Counties from boarding stops along Howard St., at the Transbay Transit Terminal, and along Sansome St. Discharge stops are located along Folsom St., at the Transbay Transit Terminal, and along Battery St. The closest stops to the project site are at Sacramento and Sansome Sts. (boarding) and Sacramento and Battery Sts. (discharge), one and two blocks east of the site, respectively. Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry Building, about 2,500 ft. east of the site.

III. Environmental Setting

Golden Gate Transit also operates a van pool program to North Bay areas not served by existing motor coach routes. The RIDES car pool program operates as a nonprofit, publicly funded corporation, and provides consulting and matching services to help establish Bay Area carpools and vanpools. Currently, there are about 610 carpools on the Golden Gate Bridge during the a.m. peak hour, carrying about 2,180 people daily (average occupancy of 3.6 persons per vehicle). The Bay Bridge has about 1,890 carpools during the a.m. peak hour, carrying about 7,560 people daily (an average occupancy of 3.9 persons per vehicle)./2,3/

Pedestrian activity around the site during the peak periods of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. is directed primarily to and from transit and parking facilities. Peak afternoon pedestrian flows are generally more intense than those of the morning period. Noon-hour flows are generally equivalent to or more intense than the afternoon flows, and are directed primarily to restaurants and retail stores within the downtown area.

Sidewalk widths on Montgomery St. in the project block are restricted by restaurant signs, trash cans, and a fire hydrant, resulting in an effective (clear) width of 7 ft., about 60% of the full building-to-curb width of 12 ft. Sidewalk widths on Sacramento St. are restricted by newsstands and a traffic signal pole, for an effective width of 6 ft., about 55% of the unobstructed full width of 11 ft.

The Sacramento St. sidewalk along the project frontage currently operates during the noon hour at the lower end of the impeded range. Appendix D, Table D-2, p. A-39 is a summary of pedestrian flow regimens (open, impeded, etc.). During the afternoon peak period, between 4:00 and 6:00 p.m., the Sacramento St. sidewalk operates in unimpeded conditions.

The Montgomery St. sidewalk along the project frontage currently operates near the lower end of impeded conditions during the noon hour and near the upper end of unimpeded conditions during the p.m. peak. Operating conditions on the Montgomery St. sidewalks near Market St. (about five blocks south of the project) are in the constrained to crowded ranges during peak periods.

III. Environmental Setting

Crosswalk flows across Montgomery St. at Sacramento St. currently operate in impeded conditions during the noon hour and in unimpeded conditions during the p.m. peak hour. Existing pedestrian flows across Sacramento St. at Montgomery St. operate in impeded conditions during both the noon hour and the p.m. peak-hour.

NOTES - Transportation, Circulation and Parking

/1/ San Francisco Department of City Planning, January 1983, Transportation, an Element of the Master Plan.

/2/ Kay McGill, Golden Gate Bridge, Highway and Transportation District, telephone conversation, May 13, 1982.

/3/ Elysia Chan, Public Information Officer, Rides for Bay Area Commuters, Inc., telephone conversation, May 13, 1982.

F. AIR QUALITY

San Francisco's air quality, in general, is the least degraded of all the developed portions of the Bay Area. Because of the prevailing westerly and southwesterly winds, San Francisco is more a generator of its own air quality problems (especially carbon monoxide (CO) and total suspended particulates (TSP)) and a contributor to those problems in other parts of the Bay Area (especially ozone (O_3)), than a recipient of pollutants from elsewhere.

The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station about 2.5 miles south of the site at 900 23rd St. A three-year summary of the data collected, and the corresponding ambient air quality standards, are shown in Appendix F, p. A-55. These data show occasional excesses of the CO and TSP standards. In 1982, the eight-hour standard for CO was exceeded once and the 24-hour TSP standard exceeded three times. The one-hour CO standard was never exceeded. (A more-stringent one-hour CO standard went into effect January 15, 1983.) The only air pollutant to exceed standards in 1980 and 1981 was TSP; the 24-hour standard was exceeded six times in 1980 and once in 1981.

III. Environmental Setting

Highest annual pollutant concentrations in San Francisco, while exhibiting fluctuations due to variations in meteorology, have shown an overall improvement during the 1971-1982 period. No similar trend in the annual number of violations of standards is evident, although such occurrences are infrequent (six a year or fewer).

Emissions from motor vehicles are the largest source of CO, hydrocarbons (HC), TSP, and nitrogen oxides (NOx) in San Francisco, while power plant fuel combustion is the largest source of sulfur oxides (SOx)./1/

The nine-county San Francisco Bay air basin is designated by the California Air Resources Board (ARB) as a nonattainment area for O₃, CO and TSP. (Nonattainment means the federal ambient air quality standards for these pollutants have been violated within the past two to three years.) As required by the federal Clean Air Act Amendments of 1977, a regional Air Quality Plan has been adopted that establishes control strategies (stationary and mobile source emission controls and transportation improvements) to attain Federal and State standards for these pollutants by 1987./2/ The BAAQMD, Metropolitan Transportation Commission (MTC), and ARB have primary responsibility for implementation of these strategies.

NOTES - Air Quality

/1/ California Air Resources Board (ARB), 1979, Emission Inventory 1976.

/2/ Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1982 Bay Area Air Quality Plan, December 1982.

G. EMPLOYMENT, HOUSING AND FISCAL FACTORS

ON-SITE EMPLOYMENT

Approximately 260 employees currently work at the project site./1/ Employees include office, banking, restaurant, retail and maintenance workers. Table 2, p. 41, identifies the gross floor area of each tenant on-site. About 98% of the total building office area on-site is currently occupied.

TABLE 2: EXISTING USES AT PROJECT SITE /a/

<u>Lot; Address</u>	<u>Tenant</u>	<u>Use</u>	<u>Gross Floor Area (Square Feet)</u>		
			<u>Office/b/</u>	<u>Retail</u>	<u>Subtotal/b/</u>
5; 527 Montgomery St.	Mr. Submarine	Restaurant		788	788
	L. Prentice	Office	788		788
	Subtotal		<u>788</u>	<u>788</u>	<u>1,575</u>
6; 615-617 Commercial St.	Everybody's	Beauty Salon		924	924
	Xerox	Office/Warehouse	1,290		1,290
	Bank of America	Office	2,059		2,059
	Subtotal		<u>3,349</u>	<u>924</u>	<u>4,273</u>
6A; 517-519 Montgomery St.	Fink's	Restaurant/Bar		1,071	1,071
	Allied Artists	Office	1,071		1,071
	Subtotal		<u>1,071</u>	<u>1,071</u>	<u>2,142</u>
7; 501-505 Montgomery St.	Fotolithics	Photo Lab	400		400
	Gigi's	Restaurant		1,775	1,775
	For Eyes	Opticians		1,300	1,300
	Paper and Ink	Photocopiers		245	245
	Coast Fed. Savings	Savings and Loan	1,840		1,840
	Bank of America	Office	11,660		11,660
		Vacant	1,263		1,263
	Dr. Lawrence Lipkind	Dental office	1,235		1,235
	Subtotal		<u>16,398</u>	<u>3,320</u>	<u>19,718</u>
8; 616-618 Sacramento St.		Vacant		1,285	1,285
		Vacant	643		643
	D'Arcy MacManus	Office	643		643
	Xin Feng She	Office	1,285		1,285
	Subtotal		<u>2,570</u>	<u>1,285</u>	<u>3,855</u>
9; 624 Sacramento St.		Vacant		4,887	4,887
10; 628-630 Sacramento St.	Tachibana	Restaurant		1,208	1,208
	State Farm Insurance	Office	1,208		1,208
	Subtotal		<u>1,208</u>	<u>1,208</u>	<u>2,415</u>

(Continued)

TABLE 2: EXISTING USES AT PROJECT SITE /a/ (Continued)

<u>Lot;</u> <u>Address</u>	<u>Tenant</u>	<u>Use</u>	<u>Gross Floor Area (Square Feet)</u>		
			<u>Office</u>	<u>Retail</u>	<u>Subtotal/b/</u>
11; 638-640 Sacramento St.	Getz Bros.	Office	24,305		24,305
27; 653-655 Commercial St.	Mercedes'	Restaurant		2,200	2,200
	Pat Franklyn	Office	2,735		2,735
	Subtotal		<u>2,735</u>	<u>2,200</u>	<u>4,935</u>
28; 627-629 Commercial St.	Art Blum	Office	1,198		1,198
	Applause	Hair Salon		1,190	1,190
	Subtotal		<u>1,198</u>	<u>1,190</u>	<u>2,388</u>
TOTALS/b/			53,621	16,872	70,493

/a/ Existing on-site employees are estimated to number 260 (rounded to the nearest ten), based on one office employee per 250 gross sq. ft. of office space, one retail/restaurant employee per 350 gross sq. ft. of retail space, and one building employee per 12,000 gross sq. ft. of total floor area.

/b/ Sums of figures do not equal totals due to rounding of fractional square feet.

SOURCE: The Empire Group

SAN FRANCISCO AND REGIONAL OFFICE SPACE MARKET

● Existing and Proposed Office Space in San Francisco

San Francisco is the major office center in the Bay Area, with approximately 60.6 million gross sq. ft. of office space at the end of 1982./1a/ The C-3 district had 55.3 million sq. ft. of office space in 1981 and currently has about 62.1 million sq. ft. of office space in 1984./1b/ Historical data indicates that office space was added at average rates of 1.5 million sq. ft. per year during the 1970s and 2.4 million sq. ft. per year from 1980 through 1982./1a/

III. Environmental Setting

The projects under review, approved or under construction as of March 10, 1984 include projects in the greater downtown area outside of the C-3 District (see Appendix C-2, pp. A-32a to A-32d). An additional 5.5 million gross sq. ft. of net new office space will be added when the buildings under construction are finished, and another 4.8 million sq. ft. of net new office space has been approved but is not yet under construction. Another 8.7 million sq. ft. would be added if the projects under formal review, as of March 10, 1984, were eventually built. This total of about 19.0 million gross sq. ft. of net new office space (under formal review, approved, under construction, or completed but not fully occupied as of March 10, 1984) includes the 505 Montgomery St. project, listed as adding about 300,700 gross sq. ft. of net new office space. "Net" includes additional space, subtracting existing space on sites being developed or proposed for development.

Office space projections in the Downtown Plan Draft EIR indicate the C-3 District would contain approximately 70.5 million gross sq. ft. of office space by 1990, and 78.9 million gross sq. ft. of office space by 2000./1c/ Alternatives analyzed for the Downtown Plan DEIR indicate a range of 77.5 million to 86.5 million gross sq. ft. of total office space in the C-3 District by 2000./1d/ Forecasts in the Downtown Plan DEIR indicate net increases of office space in the downtown of approximately 1.4 million sq. ft. per year between 1984 and 1990 and a range of 0.7 to 1.6 million sq. ft. per year between 1990 and 2000.

Vacancy Rates and Commercial Rents

On the basis of a 1982 survey of 290 office buildings, the San Francisco Building Owners and Managers Association (BOMA) reported a citywide vacancy rate of 6%./2/ This rate is an increase over the 3.7% rate in an earlier 1982 BOMA survey and the 1.0% rate reported by BOMA in its 1981 survey. According to a June 1983 Coldwell Banker survey, the vacancy rate in downtown San Francisco office buildings (new, existing, and major renovations) was 7.2%./3/ This is an increase from 3.4% during June 1982 and 5.7% during December 1982 reported in earlier Coldwell Banker surveys. The vacancy rate for June 1983 is the highest reported for San Francisco since Coldwell Banker started this survey in 1978. The current 7.2% vacancy rate is the fifth

lowest of the 28 major downtown financial districts in the United States surveyed by Coldwell Banker./3/ For comparison, as of June 1983, the vacancy rate was 11.7% nationally; 8.7% in Chicago; 4.2% in downtown Manhattan; and 13.1% in Dallas./3/

Both surveys indicate a continued increase in the vacancy rate for downtown office buildings over the last two years. This increase is the result of several factors, including an increase in the amount of available office space (new space being completed and space available for sublease), a short-term decrease in the demand for office space, and the continuing nationwide economic recession. Higher vacancy rates indicate a softer office market than has existed in recent years. According to Coldwell Banker, "Demand for prime office space in San Francisco's financial district remains strong as evidenced by healthy levels of pre-leasing activity in new buildings and a June vacancy rate considerably below the national average."/3/

There has been a concurrent demand for and development of office space elsewhere in the Bay Area. Some businesses have moved their clerical, support, and production departments to outlying areas while maintaining headquarters and main branch offices in San Francisco. In particular, the City of Oakland, and San Mateo and Contra Costa Counties, are experiencing increased demand for office space. As of January 1982, about six million sq. ft. of office space was proposed for construction in Oakland over the next 10 years,/4/ about 17 million sq. ft. of office space is proposed or under construction in San Mateo County,/5/ and 15.8 million sq. ft. of space is proposed or under construction in Contra Costa County./6/ These totals include projects in various stages of public review, not all of which may be approved or built.

As a result of high demand in San Francisco and of increasing operating costs, land prices, construction costs, and interest rates, annual rents for office space in the downtown financial district have more than tripled in the last decade, from \$8.50 per sq. ft. in 1970 to approximately \$30 per sq. ft. in 1981. New buildings are able to charge the highest rents, while office rents in older buildings south of Market are less expensive, averaging between \$10 and \$15 per sq. ft./7/ The rents for new office space in San Francisco (\$25

III. Environmental Setting

to \$42 per sq. ft) are about 45% higher than commercial rents in Oakland (\$18 to \$27 per sq. ft.); the Peninsula (\$18 to \$24 per sq. ft.); and Contra Costa County (\$16 to \$27 per sq. ft.).^{/8/} Should the recent rise in vacancy rates continue, the pressure for higher commercial office rents would be expected to decline in San Francisco. A rising vacancy rate could lower rents and increase future lessees' choice of size, layout, and location of office space.

SAN FRANCISCO HOUSING

Both regional and San Francisco housing stock are characterized by low growth rates, low vacancy rates, and high purchase and rental costs in relation to typical wages paid. This combination of factors and high interest costs has tended to constrict the supply and affordability of housing in San Francisco.

San Francisco has about 316,600 occupied housing units, according to the 1980 U.S. Census; about two-thirds of the housing stock is rented and one-third is owner-occupied.^{/9/} The number of permits for new single- and multiple-housing units in San Francisco decreased 34.4% between 1979 and 1980.^{/10/}

San Francisco housing starts in 1982 totaled about 1,550 units; of these, about 830 were low- and moderate-income units and about 720 were market-rate units.^{/11/} The average 1980 market value of a single-family house was \$140,000 in the Bay Area and \$148,000 in San Francisco.^{/12/} The 1980 Census reports a 1980 median value of \$104,600 for single-family units (not including condominiums), and a vacancy rate of 1.0% for owner-occupied dwellings in San Francisco.^{/13/} According to a statistically non-random survey of newspaper advertisements by the Department of City Planning in 1980, median advertised rents ranged from \$289 for a studio apartment to \$588 for a unit with 3+ bedrooms, and averaged \$455 for all types of units. Census data for 1980 indicated a median rent in the City of \$267 and a vacancy rate of 4.2% for rental units.^{/13/} The Census data include residential hotels and subsidized housing. A survey conducted by the Federal Home Loan Bank of San Francisco between August and November of 1981 indicated a vacancy rate of 0.7% for multi-family units and 1.3% for single-family houses.^{/14/} A vacancy rate of 4% to 5% indicates a competitive market; the very low rate in San Francisco means that people looking for housing are having difficulty finding new residences. This high demand for housing may also cause further price increases.

FISCAL

Property Tax Revenues

The assessed value of the project site in 1982 was approximately \$4 million./15/ Under the fiscal year 1982-83 property tax rate of \$1.17 per \$100 of assessed value, the site generates about \$47,600 in property tax revenues. The largest portion, \$40,600 or 85%, is distributed to the City and County of San Francisco; about \$3,500 goes to the San Francisco Unified School District; about \$600 to the San Francisco Community College District; \$100 to the Bay Area Air Quality Management District (BAAQMD); and \$2,800 to BART./16/

Other Taxes

The site also generates other taxes. In 1982-83, the General Fund revenues to the City and County of San Francisco from the site's sales, payroll, gross receipts, and utility taxes are estimated at about \$113,000. The individual components of these tax revenues are discussed in Section IV. Environmental Impact, pp. 125-127.

Costs and Net Revenues

The City incurs costs in serving the existing buildings. Police, fire and general government expenditures are supported primarily by the General Fund. Most street-maintenance, street-improvement, and traffic-control costs are supported by other revenue sources such as fees, fines, and federal and state aid; such aid has been declining.

NOTES - Employment, Housing and Fiscal Factors

/1/ Square footage of buildings provided by project sponsor, The Empire Group, July 1983; number of current employees estimated by Environmental Science Associates, Inc.

- /1a/ San Francisco Department of City Planning, 'Major Office Building Construction in San Francisco Through 1982,' March 15, 1983.
- /1b/ San Francisco Department of City Planning, Downtown Plan DEIR), EE.81.3, March 16, 1984, pp. IV.B.2 and IV.B.17.

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- /1c/ Downtown Plan DEIR, pp. IV.B.28 and IV.B.31.
 - /1d/ Downtown Plan DEIR, Appendices, pp. G.37-G.41.
- /2/ Elmer Johnson, Building Owners and Managers Association, telephone conversation, December 22, 1982.
- /3/ Coldwell Banker, "Office Vacancy Index of the United States", June 30, 1983. San Francisco vacancy rates are part of a national survey of 28 major downtown districts conducted quarterly. A copy of the June 30, 1983 survey is on file and available for public review at the Office of Environmental Review, 450 McAllister Street, Fifth Floor.
- /4/ City of Oakland Department of City Planning, "Major Buildings in the Central District," January 16, 1982. No more current data on Oakland development are available from the Department.
- /5/ "Proposed Specific Plan: Bayshore Office Park and Baylands Development Area, Brisbane, California", Blayney-Dyett, Urban and Regional Planners, July 1982, and "Travel Impacts of Proposed Development on the Peninsula Along Route 101", Metropolitan Transportation Commission, September 9, 1982.
- /6/ "Proposed East Bay Office/Industrial Development", People For Open Space, October 1982.
- /7/ Department of City Planning Memorandum to the City Planning Commission, "South of Market Interim Controls", January 26, 1982.
- /8/ "The Commercial Real Estate Market in the San Francisco Bay Area", Coldwell Banker, December 1982.
- /9/ Association of Bay Area Governments (ABAG), "Census Data Bulletin No. 6", March 1982.
- /10/ ABAG, "Housing Activity Report, Number 3", May 1981.
- /11/ San Francisco Progress Real Estate Guide, "'82 Homes Built for Moderate Income Buyers", November 5, 1982, based on information obtained from the Mayor's Office of Housing and Community Development.
- /12/ Security Pacific Bank, "Monthly Summary of Business Conditions - Northern Coastal", March 31, 1981, p. 2.
- /13/ San Francisco Department of City Planning, "1980 Census Information", March 1982.
- /14/ Federal Home Loan Bank of San Francisco, "San Francisco County Housing Vacancy Survey", May 1982.
- /15/ San Francisco Assessor's Office. The assessed value includes Assessor's Block 227, Lot 5 - \$111,379; Lot 6 - \$663,000; Lot 6A - \$130,645; Lot 7 - \$1,567,769; Lot 8 - \$215,076; Lot 9 - \$297,660; Lot 10 - \$146,399; Lot 11 - \$727,176; Lot 27 - \$132,054; and Lot 28 - \$80,422.
- /16/ Data from San Francisco Controller's Office; calculations by Environmental Science Associates, Inc.

IV. ENVIRONMENTAL IMPACT

An application for environmental evaluation for the project was filed in September 1982. On January 7, 1983, it was determined that an Environmental Impact Report (EIR) was required, based on an Initial Study. Issues determined to require no further discussion as a result of the Initial Study include land use compatibility; noise during project operation; air quality during construction; public services and utilities; biology; land (topography, soils, geology and hydrology); hazards; and sub-surface cultural resources; therefore, this EIR does not discuss these issues. (See Appendix A, pp. A-2 - A-24, for the Initial Study.)

Some of the impacts presented in this section are not physical environmental effects as defined by the California Environmental Quality Act. They are included in the EIR for informational purposes only.

● INTRODUCTION TO CUMULATIVE IMPACT ANALYSIS

Two approaches are used to assess cumulative impacts. The "Downtown Plan forecast" approach presents a cumulative scenario for C-3 District land use change, employment growth, and residence patterns between 1984 and 2000. Its forecasts are based on analysis of the effects of C-3 District planning policies in the context of underlying local and regional economic conditions. The "list-based" approach uses the March 10, 1984 list of projects in the greater downtown area that are under formal review by the Department of City Planning, approved, or under construction, as the basis for estimating future activity. The space in projects on the list represents foreseeable future development which is added to the base year (1984) level of developed space.

In the subsequent cumulative impact sections, the project's effects are compared to the overall effects within each of these two cumulative contexts. Because of several essential differences between the two approaches, however,

estimates of cumulative effects derived from the two approaches cannot be directly compared.

The following Table 2A, p. 48b, highlights the differences between the Downtown Plan forecast approach and the list-based approach. Generally, the basic difference is that the Downtown Plan approach accounts for changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach is limited to known projects of certain types and assumes unchanging characteristics and behavior. These two approaches are alternative means of assessing the future cumulative context for downtown development. They use different available data sources and information and different assumptions, as summarized in Table 2A.

A. LAND USE AND ZONING

The project would comply with the 400-ft. height limit for the portion of the site proposed for new development. Total project height would be 366 ft., including a 16-ft. mechanical penthouse exempted from the height limit, per City Planning Code Sec. 260(a)(B).

The building length of about 120 ft. would be about 50 ft. less than the maximum permitted 170 ft., and the maximum diagonal dimension of about 170 ft. would be about 30 ft. less than the maximum permitted diagonal dimension of 200 ft. (both applicable above a height of 150 ft.). The project's total gross office and retail area of 366,390 gross sq. ft. would yield a floor area ratio (FAR) of 14:1, the maximum permitted in the C-3-0 District, including 337,150 gross sq. ft. of new construction and 29,240 sq. ft. of space in the two retained buildings.

● TABLE 2A: COMPARISON OF CUMULATIVE IMPACT ASSESSMENT METHODOLOGIES

	<u>Downtown Plan Forecast Approach</u>	<u>List-Based Approach</u>
Focus of Impact Assessment	- Impacts of C-3 District land use and employment within context of rest of City and region	- Impacts of land use and employment in the greater downtown area including C-3 District and adjacent areas) within context of rest of City and region
Timeframe	- 1984 base year - Changes in C-3 District land use and employment forecast to occur between 1984 and 2000	- 1984 base year - Changes in greater downtown land use and employment determined by buildout of March 10, 1984 List of Cumulative Office Development in downtown San Francisco. (Although no date is attached to this build-out, it could occur between 1990 and 2000)
Land Use	- 1984 base year includes all land uses - Incorporates changes over time in office, retail, hotel, industrial, and all other C-3 District space - Reflects changes in response to market demands for space within context of C-3 District planning policies - Incorporates new construction, demolitions, and conversions for all land uses - Incorporates more intensive use of space (both existing and new) over time (e.g. employment density for management/technical office is 276 gross sq. ft. of occupied space per employee in 1984 and 267 gross sq. ft. per employee in 2000)	- 1984 base year includes all land uses - Incorporates net additions of office and retail space in greater downtown area as shown on the List - Reflects changes as a result of development of projects on the List - Incorporates new construction and demolition of office and retail space and conversions to office and retail uses as included on the List - Intensity of use of spaces does not change over time (e.g., employment density for management/technical office is always 276 gross sq. ft. of occupied space per employee)
Employment	- 1984 base includes all C-3 District employment - Changes over time incorporate increases and decreases in all types of permanent employment directly associated with a land use, in building maintenance/security employment, and in construction employment	- 1984 base includes all employment in the greater downtown area - Changes over time incorporate the growth of office and retail employment as a result of development of the projects on the List
Residence Patterns and Housing	- Residence patterns change over time reflecting changing regional labor force, housing market, employment and transportation factors (e.g., the percentage of C-3 District management/technical office workers living in San Francisco is currently 49% and would decline to 44% in 2000)	- No change in residence patterns from current conditions (e.g. the current 49% of C-3 District management/technical office workers living in San Francisco is assumed to continue to apply)
Transportation	- Trip generation has been adjusted to account for travel between buildings such as between office and retail uses) which does not leave the downtown - Modal split changes over time reflecting capacity improvements, changing residence patterns, and behavior adaptations - Includes growth of local and regional non-C-3 District travel	- No adjustment made to trip generation; all trips for buildings on the List counted as new travel in or out of downtown - No changes from current modal splits are assumed - Local and regional non-C-3 District travel assumed to remain constant at 1984 levels, except for addition of travel due to development of the projects on the List
Key Reference	- Downtown Plan Draft EIR, EE 81.3, March 16, 1984	- Guidelines for Environmental Impact Review; Transportation Impacts, September 1983

SOURCE: Recht Hausrath & Associates

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The proposed project would respond to objectives of the San Francisco Comprehensive Plan and to the City Planning Code description of the C-3-0 (Downtown Office) District as playing a leading national role in finance, corporate headquarters and service industries, and as serving as an employment center for the region.

The project would be in accord with some policies of the Commerce and Industry Element of the City's Comprehensive Plan. It would respond to Objective 1, Policy 1, to maintain and enhance a favorable business climate in the City. The project would respond to Objective 3, Policy 1 in providing jobs for San Francisco residents; clerical, janitorial, and construction jobs resulting from the project would provide "employment improvement opportunities for unskilled and semi-skilled workers." The overall employment generated by the project is found in Section IV.I. Employment, Housing and Fiscal Factors, pp. 120-121.

- The project is intended to respond to Objective 4, Policy 2, to promote and attract economic activities of benefit to the City. The project would respond to Objective 6, to support San Francisco as a 'prime location for financial, administrative, corporate, and professional activity.' The project would respond to Policy 1 of this Objective, to encourage continued growth of downtown office activity. Policy 2 of Objective 6 is to guide 'office development to maintain a compact downtown core so as to minimize displacement of other viable uses.' The project would respond to this policy in that the proposed office development would occur within the downtown core. It would not respond to the second part of the policy insofar as there would be a net loss of up to 4,772 sq. ft. of retail space on the site. (Tenant displacement effects of the project are discussed in Section IV.I., Employment Housing and Fiscal Factors, p. 120.) The sponsor is considering conversion of a portion of ground-floor office space at 638-640 Sacramento St. (641 Commercial St.) to retail uses.
- The project would be consistent with land use along Montgomery St. in the C-3-0 District, which includes the 601 Montgomery St. building, the Transamerica Pyramid, the Bank of Canton building, the Washington-Montgomery building and 456 Montgomery St.; the latter three buildings are under

construction. These buildings generally replaced groups of two- to four-story retail-office buildings, as would the proposed project. West of Montgomery St., in the project vicinity, land uses include low-rise office, retail and residential structures in Chinatown, on lots that typically have 25 ft. to 40 ft. of street frontage. The project would contrast with the scale and lot configuration of those uses. The project would retain two low-rise buildings on smaller lots, west of the new building: 638-640 Sacramento St. and 653-655 Commercial St.

The relationship of the project to City urban design policies is discussed in Section IV.B. Urban Design and Visual Quality, pp. 60-71, and Table 4, pp. 61-64.

THE DOWNTOWN PLAN

In August 1983, the Department of City Planning published The Downtown Plan, Proposal for Citizen Review (the plan). The plan contains proposals for comprehensive changes in controls of the scale, intensity, and location of growth in downtown San Francisco; architectural preservation; open space; sunlight access; and transportation. The Downtown Plan will undergo public review, and possible modification, before final implementation of new Master Plan and City Planning Code provisions by the City Planning Commission and the Board of Supervisors.

The relationship of the project to the major proposals of the plan is discussed below, and summarized in Table 3, p. 51. (See Section VII., Alternatives, p. 147, for an alternative conforming to the plan.

The Downtown Plan proposes that the base FAR for the C-3-0 district, including the project site, be changed from 14:1 to 10:1, and would exclude ground floor retail, building service and internal circulation areas from the FAR calculation. Development greater than the base 10:1 FAR would be allowable through Transfer of Development Rights (TDR) from sites with unused potential floor-area within the same zoning district, that include architecturally

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significant buildings or new parks or open space. The increased floor area on the site receiving TDR, however, may not exceed the height, bulk, and other controls of the plan for that site.

The plan proposes changes in the boundaries of the existing C-3-0 district: Portions of the existing C-3-0 district would be made part of a new special mixed-use district to be developed for the whole of Chinatown. (The Downtown Plan does not discuss potential floor area or height and bulk controls for the Chinatown special district.) The western part of the project site (Lots 11 and 27), which includes the two project buildings proposed to be retained, would be part of that new district.

The project's total gross floor area, at a 14:1 FAR, at 366,390 sq. ft. would be about 82,690 sq. ft. greater than the 283,700 sq. ft. allowed under the plan (10:1 FAR on the 26,170 sq. ft. site, plus about 22,000 sq. ft. for ground floor uses, an effective FAR of 11:1 for the site).

The portion of the project site proposed to remain in the C-3-0 district (the area proposed for new construction for the project) would be in a 250-S Height and Bulk District, permitting structures up to 250 ft. in height (with exceptions noted below). At 350 ft., the project would exceed the proposed height limit by up to 100 ft. The "S" bulk designation would control building dimensions, floor sizes and bulk through Downtown Plan Bulk Control Zone Charts A and B. Essentially, these would require setbacks, smaller floor sizes and slimmer building profiles as building height increased. For a 250-ft. building on the project site, the proposed controls would require a base zone, related to the width of the widest abutting street (in this case, Montgomery St.), delineated by a setback, cornice or other architectural feature, and a lower tower zone that could be developed out to the lot lines (if there were no setbacks from the base zone). An upper tower zone would begin at a height of 200-ft.; average floor area in this zone could not exceed 12,000 sq. ft., and building volume would be required to be reduced by about 20%, compared to a straight vertical extension of the lower tower.

● TABLE 3 (Revised): COMPARISON OF PROPOSED PROJECT WITH THE DOWNTOWN PLAN

Major Development Controls Pertaining to Project Site	Current Controls	Proposed Project	Proposed Requirements in the Downtown Plan	Downtown Plan Alternatives /c/		
				Alternative 2: 12:1 FAR	Alternative 2A: No Shadow Port. Sq.	Alternative 2B: 10:1 FAR
Base FAR	14:1	14:1	10:1 /a/	12:1 /a/	11.5:1 /a/	10:1 /a/
Height Limit	400 ft.	350 ft.	250 ft. /b/	275 ft. /b/	250 ft.	275 ft. /b/
Average Floor Area	18,000 sq.ft. /d/	14,000 sq.ft.	Varies by bulk zone; see below.	See below.	See below.	See below.
Maximum Diagonal	200 ft.	170 ft.	Varies by bulk zone; see below.	See below.	See below.	See below.
Base Zone Height	NA	NA	80 ft.	85 ft.	85 ft.	85 ft.
Lower Tower Zone /e/ Max. Average Floor Area	NA	NA	20,000 sq.ft.	85 - 215 ft.	85 - 200 ft.	85 - 215 ft.
Max. Average Diagonal			200 ft.	18,600 sq.ft.	17,800 sq.ft.	14,500 sq.ft.
Max. Plan Width			160 ft.	200 ft. 160 ft.	200 ft. 160 ft.	175 ft. 130 ft.
Upper Tower Zone /e/ Max. Average Floor Area	NA	NA	215 - 275 ft.	215 - 275 ft.	200 - 250 ft.	215 - 275 ft.
Max. Average Diagonal			12,000 sq.ft.	11,600 sq.ft.	10,300 sq.ft.	8,600 sq.ft.
Max. Plan Width			160 ft.	160 ft.	160 ft.	140 ft.
Max. Floor Area			140 ft.	140 ft.	140 ft.	110 ft.
Volume Reduction			17,000 sq.ft. 45/35/30% /f/	11,600 sq.ft. 50%	11,600 sq.ft. 70%	8,600 sq.ft. 50%
Tower Extension /f/	NA	NA	25 ft.	25 ft.	--	25 ft.
Incorporation of Art	Not required.	Art would be incorporated.	Art equal to 1% of total construction costs.	Art would be incorporated to meet criteria.	Art would be incorporated to meet criteria.	Art would be incorporated to meet criteria.
Ground-floor Retail	Retail permitted.	9,900 sq.ft. proposed.	Required; would be excluded from allowable FAR in C-3-0 district.	18,000 sq.ft. /a/	18,000 sq. ft. /a/	9,900 sq. ft./a/

(Continued)

● TABLE 3 (Revised) (Continued): COMPARISON OF PROPOSED PROJECT WITH THE DOWNTOWN PLAN

Major Development Controls Pertaining to Project Site	Current Controls	Proposed Project	Proposed Requirements in the Downtown Plan	Downtown Plan Alternatives /c/		
				Alternative 2: 12:1 FAR	Alternative 2A: No Shadow Port. Sq.	Alternative 2B: 10:1 FAR
Sunlight Access	--	Would shade about 30% of Portsmouth Square at 8:00 to 8:30 a.m. in March (about 9:00 to 9:30 a.m. in September. (See pp. 71-78.)	Criteria based on solar fan, height and bulk and time, duration and location of shadow. Critical times are 8 am to 4 pm PST, March 21 to Sept. 21.	Would shade about 12% of Portsmouth Sq. at 8-8:30 am (about 9-9:30 PDT). (See p. 152.)	Would not shade Portsmouth Sq. after 8:00 a.m. (about 9:00 PDT). (See p. 152.)	Would shade less than 10% of Portsmouth Sq. at 8:00 a.m. (about 9:00 PDT), and less than 5% at 8:30 a.m. (about 9:30 PDT).
Wind	None.	Would increase wind speeds above 8 mph at some street-level locations.	Building should not increase sidewalk wind speeds above 11 mph, and sitting area speeds above 8 mph.	Similar to Project	Similar to Project	Similar to Project
Recreation / Open Space	Not required.	None.	1 sq.ft. for public use per 50 sq.ft. of gross floor area; 6,740 sq.ft. for project size.	6,680 sq.ft.; would be on-site or met by off-site development of public open space.	6,380 sq.ft.; would be on-site or met by off-site development of public open space.	5,140 sq.ft.; would be on-site or met by off-site development of public open space.
Off-street Loading	2 spaces required.	2 spaces.	0.1 space per 10,000 sq. ft. of office gross floor area for buildings containing more than 10,000 sq.ft.; 1 space for 10,000-50,000 sq.ft. of retail area. 3 spaces required for project.	4 spaces (3 for office; 1 for retail).	4 spaces (3 for office; 1 for retail).	2 spaces (for office; none for retail).
Long-term Parking	None required.	23 spaces.	Discourage new long-term parking in downtown.	No long-term parking.	No long-term parking.	No long-term parking.

/a/ Downtown Plan would exclude ground-floor retail, building service and internal circulation areas from FAR; additional floor area in excess of 10:1 in Alternatives 2 and 2A reflects Transfer of Development Rights, permitted in the Downtown Plan.
 /b/ Additional height up to 10% above limit permitted with reduced bulk, or for mechanical space or usable penthouse space within 50-degree planes from edge of roof.

/c/ See Section VII., Alternatives, pp. 147-152.

/d/ Based on 400-I Height and Bulk limits.

/e/ Based on 250-S Height and Bulk limits.

/f/ The requirements for volume reduction in the upper tower zone, which vary for each of the Downtown Plan alternatives according to the lower tower bulk and optional height extension, are about 45% volume reduction for Alternative 2 with 10% tower extension; about 35% reduction for Alternative 2A without extension; about 30% reduction for Alternative 2B with extension.

SOURCE: City Planning Code; The Downtown Plan, Proposal for Citizen Review, August 1983; Skidmore, Owings and Merrill; Environmental Science Associates, Inc.

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Two optional upper tower extensions would be permitted, to allow for flexibility of design and to encourage slender and more sculptured building tops. Option I would be a 10% increase in permitted building height, with further reduction of upper tower volume, controlled by Bulk Control Zone Chart B. Option II would permit mechanical equipment, decorative roof construction, or usable penthouse space above the height limit, but within the volume formed by planes sloping inward from the outer edge of the roof at a 50-degree angle with the horizontal. The plan would allow steeples, pylons or other features with a cross-sectional area of less than 100 sq. ft., with additional height of up to 75 ft. The plan would require distinctive building tops on new buildings, such as cornices, parapets, hip roofs or domes.

The plan would require usable public indoor or outdoor open space as part of new downtown development. In the C-3-0 district, a 1:50 ratio of open space to building space would be required. The Plan would allow the open space requirement of new buildings to be met off-site by the project sponsor by development, or funding of development, of open space on public land. No open space is proposed as part of the project. Applied to the project, the 1:50 ratio would yield a 6,740 sq. ft. requirement.

B. HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

The project would demolish eight structures at the eastern portion of the site and retain two buildings on the western portion. The buildings proposed to be demolished include: 616-618 Sacramento St., 624 Sacramento St., 628-630 Sacramento St., 501-505 Montgomery St., 517-519 Montgomery St., 527 Montgomery St., 615-617 Commercial St. and 627-629 Commercial St. With the exception of 501-505 and 517-519 Montgomery St., all of the above buildings are rated "C" by the Foundation for San Francisco's Architectural Heritage (in the Splendid Survivors survey, or the C-3 District survey; see Appendix B, pp. A-25 to A-26). "C" rated buildings are defined by Heritage as of contextual importance, providing the setting for more important buildings and adding visual diversity and architectural character to the downtown area (see Section III, Environmental Setting, p. 29). The buildings proposed to be demolished are not on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown. The demolition of these older, low-rise structures and their replacement by a high-rise building would alter the context of designated City Landmarks in the vicinity of the site, including Jack's Restaurant, at 615 Sacramento St., across the street from the site; 440 and 460 Montgomery St., the facades of which are being incorporated in the 456 Montgomery St. project; and the Old Sub-Treasury Building, at 608 Commercial St., being restored as part of the Bank of Canton project.

- A plaque on the east wall of 501-505 Montgomery St., placed by the State Department of Parks and Recreation in 1968, notes that the block was the site of the San Francisco branch (established in 1841) of the Hudson's Bay Company. The site is designated State Historic Landmark No. 819. A plaque on the north wall of 517-519 Montgomery St. notes that the site was the location of the Bank of James King of William. His assassination in 1856 touched off the formation of the vigilante committees. The plaque was placed by the Daughters of the American Revolution in 1956. The plaques commemorate history and uses of the site and do not refer to the buildings to which they are attached. The two plaques would be removed and stored during project construction, and replaced on the exterior wall of the proposed new building.

The project would retain "C" rated buildings at 638-640 Sacramento St. and 653-655 Commercial St. The site buildings are discussed below, in order of date of construction.

527 Montgomery St. (built in 1906, the oldest building on the site), is rated "C" in the original Heritage survey (Splendid Survivors). The two-story brick building's upper story has a horizontal projecting window band and lintel,^{1/} and a boxed cornice^{2/} with a tile roof (see Figure 13, p. 54).

The following buildings are rated "C" in the Heritage C-3 survey:

616-618 Sacramento St. (1907), is a three-story rectangular stone masonry structure with deeply recessed windows and a slightly projecting window sill and lintel (see Figure 14, p. 55). 638-40 Sacramento St. (1907) has entrances



- ① 501-505 Montgomery St.(to be demolished)
- ② 517-519 Montgomery St.(to be demolished)
- ③ 527 Montgomery St.(to be demolished)
- ④ 615-617 Commercial St.(to be demolished)
- ⑤ 624 Sacramento St.(Entrance on Sacramento St.)(to be demolished)
- ⑥ 627-629 Commercial St.(to be demolished)
- ⑦ 638-640 Sacramento St.(to be retained)

FIGURE 13

View Southwest of Project Site,
From Montgomery and Commercial Streets

SOURCE:
Environmental Science Associates, Inc.



- ① 628-630 Sacramento St. (to be demolished)
- ② 624 Sacramento St. (to be demolished)
- ③ 616-618 Sacramento St. (to be demolished)

FIGURE 14
View of 616-618, 624 and 628-630 Sacramento Street

SOURCE:
Environmental Science Associates, Inc.

on both Commercial and Sacramento Sts. The three-story Sacramento St. facade, a later modification, is rectangular masonry broken by long horizontal windows at each level (see Figure 15, p. 57). The Commercial St. facade (also known as 641 Commercial St.) has a ground floor of four window bays divided by pilasters. The second and third floors have five irregularly spaced and sized windows. (See Figure 16, p. 58.) 615-617 Commercial St. (1907) is a two-story building with large-pane horizontal windows at the ground level and a series of Ionic pilasters at the second level. The building has a detailed cornice at the top and rustication at the ground level./3/ The DCP inventory rates the building "1". (See Figures 13 and 17, pp. 54 and 59.)

627-629 Commercial St. (1910) is a two-story grey brick building, with three small arched windows at the second level (see Figure 17, p. 59). The DCP inventory rates the building "0". 628-630 Sacramento St. (1910) is a two-story red brick building with a modified cornice and horizontal-facade banding (see Figure 14, p. 55). 624 Sacramento St. (1920) is a two-story pink and brown masonry building, with a service entrance on Commercial St. (see Figures 14 and 17, pp. 55 and 59). 653-655 Commercial St. (1923) is a two-story masonry building with pilasters running the height of the building (see Figure 16, p. 58).

501-505 Montgomery St. (1950) is a four-story building, with three horizontal window rows juxtaposed with vertical aluminum panels at the right side of the Montgomery St. frontage (see Figures 13 and 15, pp. 54 and 57). 517-519 Montgomery St. (1950) is a two-story building with a plain facade and a row of horizontal windows (see Figure 13, p. 54). Neither of these two buildings is rated by Heritage or by the Department of City Planning survey.

Four categories of architecturally significant buildings and development controls are proposed in the Downtown Plan: Category I - Significant Building, Retain Essentially Intact; Category II - Significant Building, Retain, Allow Modification; Category III - Contributory Building, Encourage Retention, Allow Replacement; Category IV - Contributory Building, Encourage Retention as Part of Conservation District, Allow Replacement. Unused



- ① 501- 505 Montgomery St. (to be demolished)
- ② 616-618 Sacramento St. (to be demolished)
- ③ 624 Sacramento St. (to be demolished)
- ④ 628-630 Sacramento St. (to be demolished)
- ⑤ 638- 640 Sacramento St. (to be retained)

FIGURE 15

View East of Project Site,
From Sacramento Street at Spring Street

SOURCE:
Environmental Science Associates, Inc.



- ① 527 Montgomery St. (to be demolished)
- ② 615-617 Commercial St. (to be demolished)
- ③ 624 Sacramento St. (Commercial St. Entrance) (to be demolished)
- ④ 627-629 Commercial St. (to be demolished)
- ⑤ 638-640 Sacramento St. (641 Commercial St.) (to be retained)
- ⑥ 653-655 Commercial St. (to be retained)

FIGURE 16
View East of Project Site,
From Mid-Block Commercial Street

SOURCE:
Environmental Science Associates, Inc.



- ① 615-617 Commercial St. (to be demolished)
- ② 624 Sacramento St. (Commercial St. Entrance)(to be demolished)
- ③ 627-629 Commercial St. (to be demolished)

FIGURE 17

View of 615-617 Commercial Street,
624 Sacramento Street and 627-629 Commercial Street

SOURCE:
Environmental Science Associates, Inc.



● FIGURE 17A

View of 527 Montgomery Street
(to be demolished)

SOURCE
Environmental Science Associates, Inc



● FIGURE 17B

View of 615 - 617 Commercial Street
(to be demolished)

SOURCE:
Environmental Science Associates, Inc.



● FIGURE 17C

View of 624 Sacramento Street (Commercial Street Facade)
(to be demolished)

SOURCE
Environmental Science Associates, Inc



● FIGURE 17D

View of 627 - 629 Commercial Street
(to be demolished)

SOURCE:
Environmental Science Associates, Inc.



● FIGURE 17E

View of 638 - 640 Sacramento Street -
641 Commercial Street Facade
(to be retained)

SOURCE
Environmental Science Associates, Inc

developable floor area on sites of buildings that are retained could be used for TDR to other sites in the same zoning district. No buildings on the project site are included in any of these categories.

In the context of project relationships to nearby buildings, buildings in the immediate project vicinity listed in the above categories are the Old Sub-Treasury Building at 608 Commercial St. (Category I), and Jack's Restaurant at 615 Sacramento St. (Category III). Both are designated City Landmarks. (See Section III, Environmental Setting, p. 31 for discussion of architectural resources in the site area.)

The plan also proposes designation of conservation districts to "facilitate preservation of the quality and character of the area as a whole." The nearest proposed district to the site is the Commercial - Leidesdorff Conservation District, directly east of the site, three-quarters of the block bounded by Montgomery, Clay, Sansome and Sacramento Sts. The character of this district is formed by a group of small buildings of varied architectural styles, generally 30 ft. to 60 ft. in height, and by the intersection of two narrow streets, Commercial and Leidesdorff (Downtown Plan, p. 75). The plan proposes a 75-ft. height limit in this district.

NOTES - Historical, Architectural and Cultural Resources

/1/ A lintel is a horizontal architectural member spanning an opening, as a door or window, to carry a superstructure.

/2/ A cornice is a molded projecting member crowning a facade.

/3/ Rustication refers to beveled edges of stone blocks which make the joints conspicuous.

C. URBAN DESIGN AND VISUAL QUALITY

The Relationship between Applicable Urban Design Policies of the Comprehensive Plan and the Proposed Project, Table 4, pp. 61-64, compares the project to policies of the Urban Design Element of the San Francisco Comprehensive Plan.

TABLE 4: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT

URBAN DESIGN POLICIES

RELATIONSHIP OF PROJECT TO POLICIES

A. Policies for City Pattern

Policy 1. "Recognize and protect major views in the City, with particular attention to those of open space and water." (p. 10)

The project site is outside major designated view corridors along Pine St. and California St. The project is outside the Portsmouth View Corridor. The project would obstruct views of Portsmouth Square from 456 Montgomery St., under construction.

Policy 3. "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)

The project would be visible from medium- and long-range view points. From Portsmouth Square and Nob Hill, the project would be visible as part of a group of existing and under construction high-rise structures of the Financial District. From other long-range viewpoints, such as Twin Peaks, the project would not be visible because of existing, intervening structures. In short-range views, the project tower would alter the small-scale character of the area. Together with newer, adjacent and nearby high-rise buildings (e.g., Bank of Canton, 601 Montgomery St., and 655 Montgomery St.), the project would define the northwest edge of the Financial District.

Policy 6. "Make centers of activity more prominent through design of street features and by other means." (p. 12)

The project would retain two buildings on Commercial St., refurbish their facades, and provide widened sidewalks and decorative street paving along its frontage consistent with proposals recommended in the Center City Circulation Study. Existing retail uses in the two buildings would be retained or increased. The project tower would remove some street-level retail uses on Commercial St., and would include ground-floor retail uses fronting Commercial St., Montgomery St. and Sacramento St.

TABLE 4: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT (CONTINUED)

URBAN DESIGN POLICIES

RELATIONSHIP OF PROJECT TO POLICIES

B. Policies for Conservation

Policy 4. "Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development." (p. 25)

The project would demolish eight buildings, six of which were C-rated in the Heritage survey. The project would retain two buildings rated "C" in the Heritage survey. No buildings on the site are on the City's List of Historically and/or Architecturally Significant Buildings in the Downtown.

Policy 6. "Respect the character of older development nearby in the design of new buildings." (p. 25)

The project tower would differ in form and scale from neighboring older buildings on Commercial, Montgomery and Sacramento Sts. The building facade materials would be stone, metal and glass; older buildings are generally faced in stone, brick or terra cotta. The project would introduce a high-rise building on this half of the block of two- to five-story buildings and would alter the setting of several City Landmark buildings in the project area. The project would retain two older low-scale buildings on Commercial and Sacramento Sts.

C. Policies for Major New Development

Policy 1. "Promote harmony in the visual relationships and transitions between new and older buildings." (p. 36)

See Items 4 and 5 above. The scale of Commercial St. would be altered by the project and the adjacent Bank of Canton Headquarters, under construction. These two buildings at Commercial and Montgomery Sts. would contrast with lower scale buildings to the west. The project would retain two older low-scale buildings on Commercial and Sacramento Sts. A setback at the eighth floor is intended to relate to the Bank of

TABLE 4: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT (CONTINUED)

URBAN DESIGN POLICIES

RELATIONSHIP OF PROJECT TO POLICIES

Policy 1. (Continued)

America building at 540-560 Montgomery St. at Clay St. The building's tapered top section would begin at the same height as the first setback on the Bank of Canton tower, across Commercial St.

"Policy 2. "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance." (p. 36)

- The project tower would use polished light grey granite and a similarly colored non-reflective glass as its primary facade materials. The building's top section would be sloped to create a distinctive roof profile. The project tower would terminate in a spire. The shape of the tower would contrast with older, low-rise buildings along Commercial and Sacramento Sts.

Policy 4. "Promote building forms that will respect and improve the integrity of open spaces and other public areas." (p. 36)

- The project site is not adjacent to public open space. The project would increase shadows in Portsmouth Square during the morning hours in the mid-winter/early-spring and late-summer/mid-fall months.
- Comprehensive Plan policies call for limiting the height or effectively orienting new buildings so as not to prevent penetration of sunlight to parks and plazas. Project sunlight and shadow effects on Portsmouth Square are discussed on pp. 71-85. The project would block views of Portsmouth Square from buildings southeast of the site.

TABLE 4: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT (CONTINUED)

URBAN DESIGN POLICIES

RELATIONSHIP OF PROJECT TO POLICIES

Policy 5. "Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development." (p. 36)

- See Items 2, 4 and 5 above. The project would be visible on the City skyline from Nob Hill and Russian Hill. The 350-ft. project would be taller than adjacent and nearby low-rise buildings to the west and immediately to the east, which are generally under 70 ft. in height. The project would be taller than the Holiday Inn (315 ft.), the 601 Montgomery St. building (280 ft.) and the Bank of Canton Headquarters (290 ft.). At 350 ft., the proposed building would be shorter than the 378-ft. high 456 Montgomery St. building, and about half the height of the Transamerica Pyramid (850 ft.).

Policy 6. "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37)

See Items 2, 4, 5 and 6 above. The project would be greater in bulk than older low-rise buildings nearby, outside the C-3-0 district, or in Chinatown to the west. The maximum horizontal dimensions of the project would be comparable to those of some nearby structures in the Financial District.

SOURCE: Urban Design Element, San Francisco Comprehensive Plan, 1971; Environmental Science Associates, Inc.

PROJECT VISIBILITY

- Views of the project from adjacent streets would include all, or most of, the project tower. From nearby street-level locations on Sacramento, Montgomery and Commercial Sts., views of the project would include the full height of the tower. The tower would contrast in scale with the low-rise (less than 70 ft. high) structures on Commercial St. to the west and east. (See Figure 18, p. 66.) Together with the Bank of Canton headquarters, under construction, the project would alter the scale of development for about 130 ft. of the 420-ft. frontage of Commercial St. between Montgomery St. and Kearny St., from that of smaller, low-rise structures to that of high-rise development. The tower would alter the setting of the City Landmark Old Sub-Treasury Building, directly across Commercial St. That building is under restoration as part of the Bank of Canton project; the Bank tower is set back 16 ft. from the facade of the Sub-Treasury. The two site buildings at 638-640 Sacramento St. and 653-655 Commercial St., proposed to be retained, would maintain the scale of this portion of Sacramento and Commercial Sts. (See Figure 19, p. 67, and Figures 15 and 16, pp. 57-58.) From points north of the site on Montgomery St., views of the project tower would be partially blocked by the Bank of Canton headquarters, under construction. From points south of the site on Montgomery St., views of the project tower would be partially blocked by the Financial Center Building at 405 Montgomery St., and the Kemper Building at 417 Montgomery St. (See Figure 20, p. 68.) The tower would differ in scale from the "banking temple" architecture of Montgomery St., including 460, 500, and 520 Montgomery St.

The project would interrupt views to the south from the windows on the south elevation of the Bank of Canton headquarters, and would interrupt views southwest from portions of the Transamerica Pyramid below the 26th floor. Views northwest from 400 Sansome St. and 456 Montgomery St. (under construction) would be partially blocked by the project. From Chinatown and Nob Hill, west of the project, the project tower would replace views of low-rise buildings that form a foreground to the Financial District buildings to the east and south (see Figure 21, p. 69). From Portsmouth Square, the project would partially block views of some buildings to the southeast; it would not obstruct any views of the Bay, as these views are obstructed by



① Bank of Canton (under construction)

② PROJECT

FIGURE 18

View East of Project
From Commercial Street, East of Kearny Street

SOURCE:

Walter Thomason & Associates; and Environmental Science Associates, Inc. (Base Photography)



PROJECT
SITE

● FIGURE 18A

View East of Project Site
From Commercial Street, East of Kearny Street

SOURCE:
Environmental Science Associates, Inc.



① Bank of Canton (under construction)

② PROJECT

FIGURE 19

View East of Project,
From Sacramento Street at Kearny Street

SOURCE:
Walter Thomason & Associates; and Environmental Science Associates, Inc. (Base Photography)



● FIGURE 19A

View East of Project Site
From Sacramento Street at Kearny Street

SOURCE:
Environmental Science Associates, Inc.



- ① Bank of Canton (under construction)
- ② PROJECT
- ③ Kemper Building
- ④ Financial Center Building
- ⑤ Kohl Building

FIGURE 20
View North of Project,
From Montgomery Street at California Street

SOURCE:
Walter Thomason & Associates; Environmental Science Associates, Inc. (Base Photography)



● FIGURE 20A

View North of Project Site
From Montgomery Street at California Street

SOURCE
Environmental Science Associates, Inc



- | | | |
|---|---|-------------------|
| ① Bank of Canton (under construction) | ⑤ Hartford Building | ⑦ Bank of America |
| ② PROJECT | ⑥ 333 California St. (under construction) | |
| ③ 456 Montgomery St. (under construction) | | |
| ④ 580 California St. (under construction) | | |

FIGURE 21

View of Project From Nob Hill

SOURCE:

Walter Thomason & Associates; and Environmental Science Associates, Inc. (Base Photography)



● FIGURE 21A

View of Project Site From Nob Hill

SOURCE:
Environmental Science Associates, Inc.



- ① Bank of Canton (under construction)
- ② PROJECT
- ③ Citicorp Building (under construction)
- ④ 580 California St. (under construction)
- ⑤ Bank of America

FIGURE 22

View of Project From Portsmouth Square

SOURCE:
Walter Thomason & Associates; and Environmental Science Associates, Inc. (Base Photography)



PROJECT SITE

● FIGURE 22A

View of Project Site From Portsmouth Square

SOURCE
Environmental Science Associates, Inc.

existing high-rise development (see Figure 22, p. 70). The project would be visible from Portsmouth Square as part of a group of office towers on Montgomery St. between Sacramento and Washington Sts., including 601 Montgomery St., the Transamerica Pyramid, the Bank of Canton and 456 Montgomery St. (under construction).

The project would be visible in the downtown skyline from some long-range view points. The top of the proposed structure would be visible from Telegraph Hill, but the bulk of the building would be blocked by the Transamerica Pyramid, 601 Montgomery St., and the Bank of Canton headquarters and 655 Montgomery St. buildings under construction. These buildings of the Financial District are man-made vertical elements which contrast with the slope of Nob Hill seen from Telegraph Hill.

When viewed from long-range viewpoints on the northeast, north and west, the project would not be a major visual focus, because of the prominence of taller structures in the downtown skyline. The project would not be visible from southern approaches to the City on the James Lick and Bayshore freeways or from Potrero Hill, because of intervening structures.

Views north from the project tower would include the Bank of Canton headquarters and the Transamerica Pyramid. Views to the east and south would include medium- and high-rise buildings in the Financial District. To the west, views would include Chinatown and Nob Hill.

D. SHADOW AND WIND

SHADOW

Project shadow effects were analyzed through a computer graphics program developed by the project architect, Skidmore, Owings & Merrill. The shadow graphics in this report are based on that work, with review and additional analysis by Environmental Science Associates./1/ The times of day discussed below represent the worst-case project shadow effects on Portsmouth Square, Redwood Park, and Commercial St.

The project tower would increase morning shadows in Portsmouth Square, in mid-winter/early-spring and late-summer/mid-fall months. From about January 7 to April 21, and from August 21 to November 7, the project tower would newly shade 10-40% of Portsmouth Square (for a maximum of two hours). Shading of the park in January and February would be about 10% to 15%, for about one hour. In March and April, shading would be 10% to 40%, with some effects over a two-hour period, until about 9 a.m. At other times of the year the project would cast new shadows covering 5% or less of the Square. The maximum effects would occur about March 21 and September 21. (See Figures 23-27, pp. 73-77.) At 8:00 a.m. Pacific Standard Time (PST) on March 21 and 8:48 a.m. Pacific Daylight Time (PDT) on September 21, the project tower would shade about one-third (the southerly section) of the Square (see Figure 23, p. 73). With existing shadows and those from the Bank of Canton (under construction), about 90% of the park would then be shaded, the worst-case effect. The project tower would shade low-rise buildings west of Brenham Place, and on the north side of Commercial St. in the project block at this time. At 8:30/9:18 a.m. (March/September), the project tower would shade about 30% of Portsmouth Square (see Figure 24, p. 74). The northwestern quarter and the southwest corner would be in sunlight at this time. By 9:00/9:48 a.m. (March/September), the project tower would shade the southeasterly corner of the Square (see Figure 25, p. 75). The remainder of the park would be in sunlight. The project tower would also shade the northeasterly portion of the Kearny/Clay St. intersection and about half of the Commercial St. frontage of the Bank of Canton.

Observations of Portsmouth Square in April 1983 on two week days and one weekend day, from 8:00 a.m. to 4:00 p.m., indicate that the number of people in the Square between 8:00 a.m. and 10:00 a.m. ranges from about 50 to 125. Peak activity in Portsmouth Square occurs between noon and 3:00 p.m., with a maximum of 300 to 450 people observed about 2:00 p.m./2/

In March/September at 1:00/1:48 p.m., the project tower would shade most of Commercial St. near the project site, adding to shadows cast by existing buildings on the site (see Figure 26, p. 76). It would also shade parts of Montgomery St., including the east sidewalk (from Commercial St., to Clay St.). At 3:00/3:48 p.m. during March/September, the project tower would add

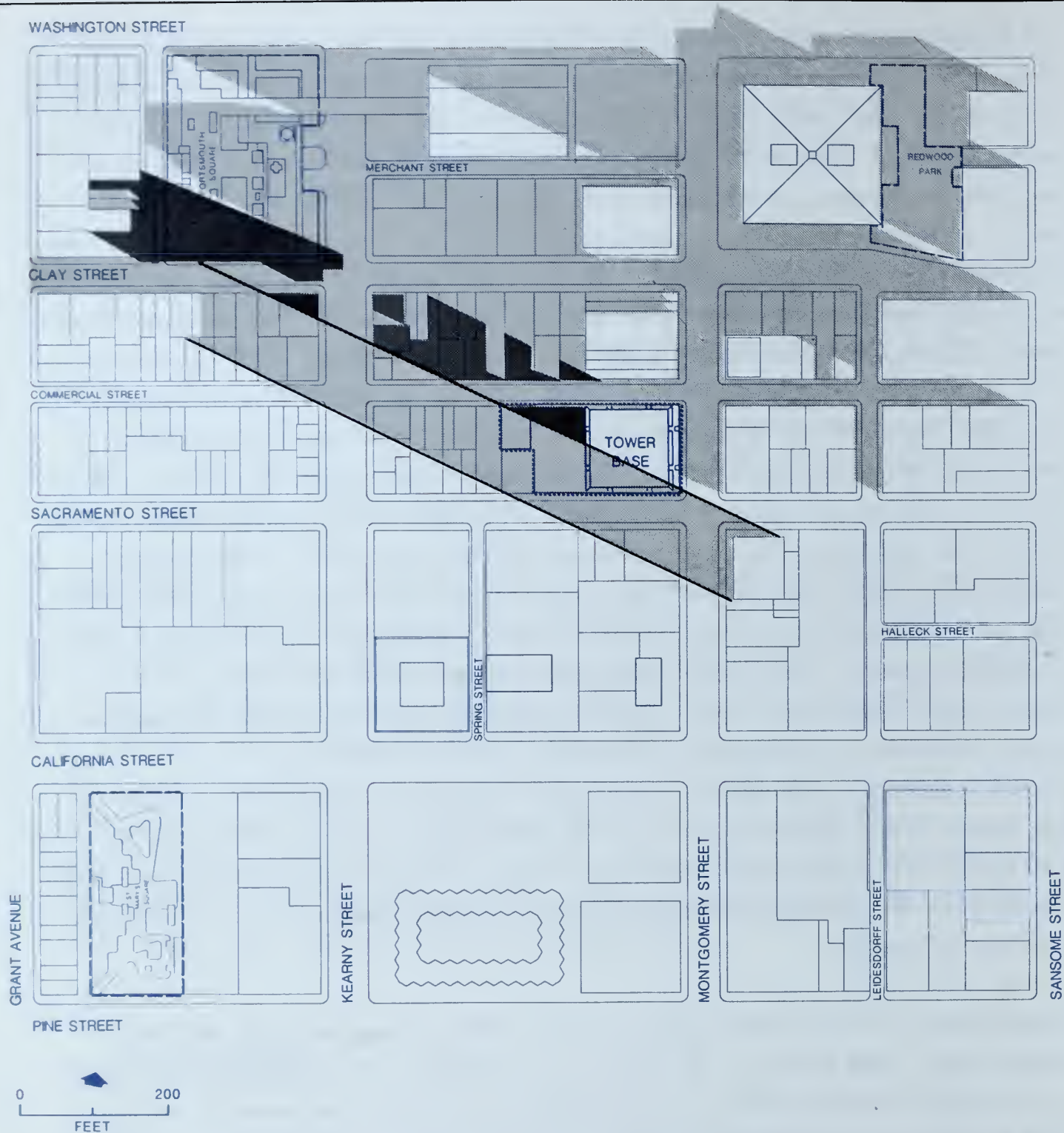


FIGURE 23

Shadow Pattern -

March/September 21, 8:00/8:48 A.M.
PST/PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

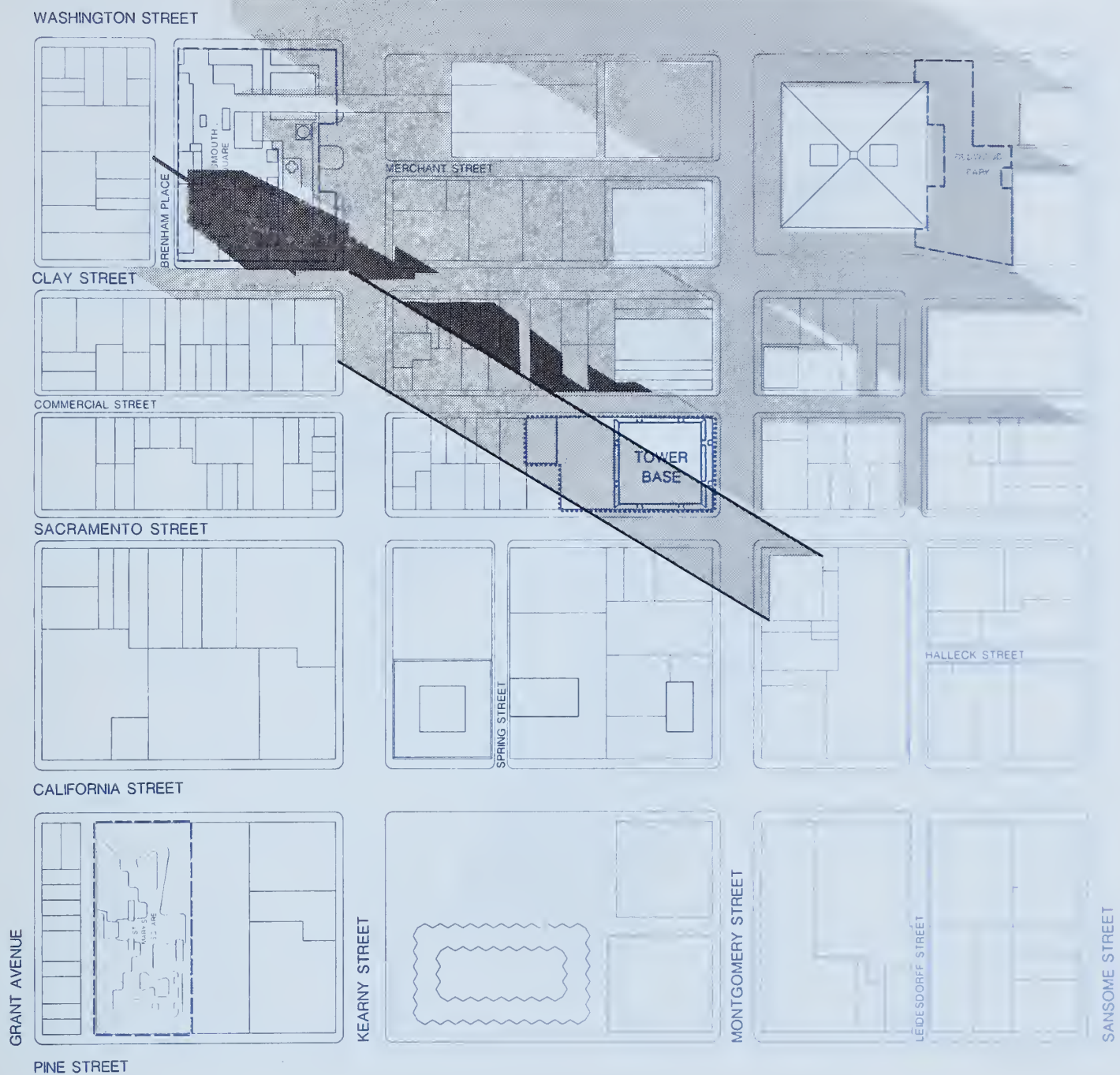


FIGURE 24

Shadow Pattern -
March/September 21, 8:30/9:18 A.M.
PST/PDT

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

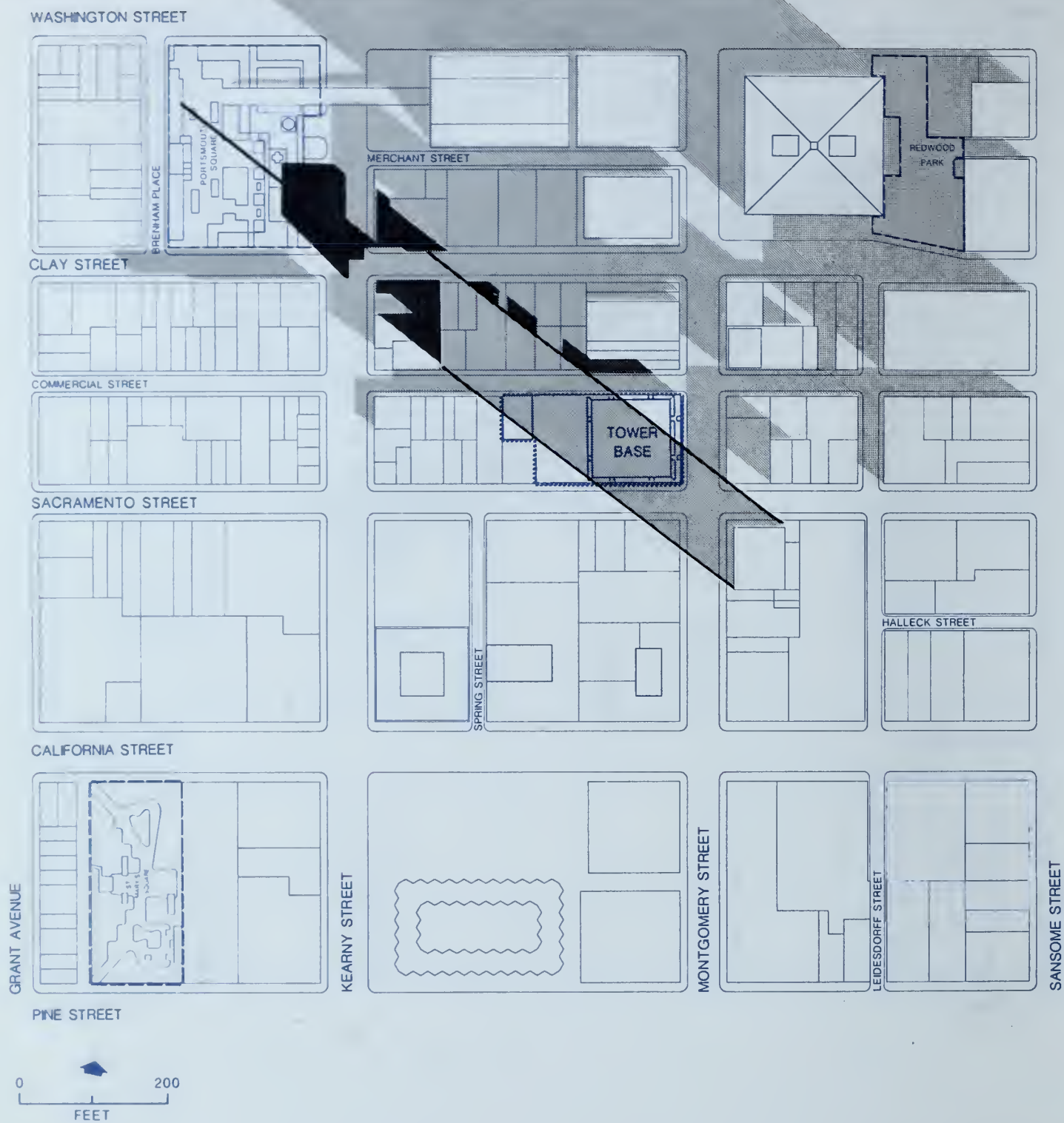


FIGURE 25

Shadow Pattern -
March/September 21, 9:00/9:48 A.M.
PST/PDT

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.



FIGURE 26

Shadow Pattern -
March/September 21, 1:00/1:48 P.M.
PST/PDT



FIGURE 27

Shadow Pattern -
March/September 21, 3:00/3:48 P.M.
PST/PDT

to existing shadows and those from the Bank of Canton on Montgomery and Commercial Sts., including the entire intersection (see Figure 27, p. 77). The southeast part of Montgomery St. between Commercial and Clay Sts. would be partly shaded by the project tower. The project tower would shade the Clay St. sidewalk south of Redwood Park, south of a shadow cast by the Bank of Canton.

In mid-December at 9:00 a.m., the project tower would cast new shadows on a small portion of the northeast corner of Portsmouth Square, and the Kearny/Washington Sts. intersection (see Figure 28, p. 79). In late morning, Portsmouth Square is shaded by the Bank of America headquarters. At 1:00 p.m., the project would not cast new shadows because of the existing shadow of the 768-ft. Bank of America tower and other existing high-rise structures (see Figure 29, p. 80). The project would not cast new afternoon shadows.

During mid-summer, at 9:00 a.m. PDT in mid-June, the project tower would shade the low-rise buildings on and west of the site, including those on the project block and on the northeastern corner of the block between Commercial and Sacramento Sts. west of Kearny St. (see Figure 30, p. 81). The project tower would also shade Commercial St. west of the site, to about 100 ft. west of Kearny St. The project would not cast shadows on Portsmouth Square. At 1:00 p.m. (Daylight Time), the project tower would shade Commercial Street adjacent to the project site, including the Old Sub-Treasury Building (see Figure 31, p. 82). At 4:00 p.m. PDT, the project tower would shade the low- and medium-rise buildings on the block east of the site between Sacramento and Commercial Sts. (see Figure 32, p. 83). It would also shade Montgomery St. in this block.

- Figure 32A, p. 83a, illustrates sky exposure and sun path from the roof of the Clayton Hotel, across Commercial St. from the project. The proposed project would cast new shadow on the solar collectors there, for periods ranging from about one to two hours in the morning, during the months of August through December, and January through April, or nine months of the year. The project would have no shadow effect on the collectors after about 10:30 a.m. (solar time) in any of these months, nor at any time of day in the months of May through July.

IV. Environmental Impact

- The solar collectors are useful primarily during the hours of about 9:00 a.m. to 3:00 p.m. (solar time). During these hours, the project is estimated to decrease the amount of solar energy received, by a maximum of about 15% in August/April, about 20% in September/March, and about 15% in October/February. In November, December, and January, the collectors are currently shaded for about one hour around noon by the Bank of America building, and for about one hour around 2:00 p.m. by the Hartford Building; both thus reduce the amount of solar energy received. Because there is less solar energy available to the collectors during these three months, therefore, the estimated percentage reduction due to the project would be greater than in other months, a maximum of about 30% of available solar energy. These represent maximum possible reductions because the project's shading of the collectors would occur before 10:30 a.m., a time before fog has usually lifted on foggy or overcast days when the amount of solar energy reaching the collectors is reduced.
- According to the system performance analysis by the Clayton Hotel's solar equipment installer, the solar water-heating system provides about 700 therms of energy per year, or about 38% of the building's total water heating load of about 1,800 therms per year./2a/ The project would decrease the existing solar contribution by about 15% to about 600 therms per year (using the estimated maximum monthly percentage reductions discussed above), or about 33% of the total annual water heating load, compared to 38% currently. (This assumes that the shading effects of existing buildings in the three-month period from November through January are reflected, as they appear to be, in the solar installer's performance analysis.)

The report, "Sun and Light for Downtown San Francisco"/3/, includes a solar fan diagram indicating that a structure 200 ft. or higher on most of the project site, and a structure 300 ft. or higher on the southerly portion would add shade to Portsmouth Square between March 21st and September 21st, between 8:00 a.m. and 4:00 p.m. Standard Time (9:00 a.m. and 5:00 p.m. Daylight Time) (see Figure 33, p. 84). This would be consistent with project shadow effects discussed above, which indicate the maximum extent of morning shadows cast by

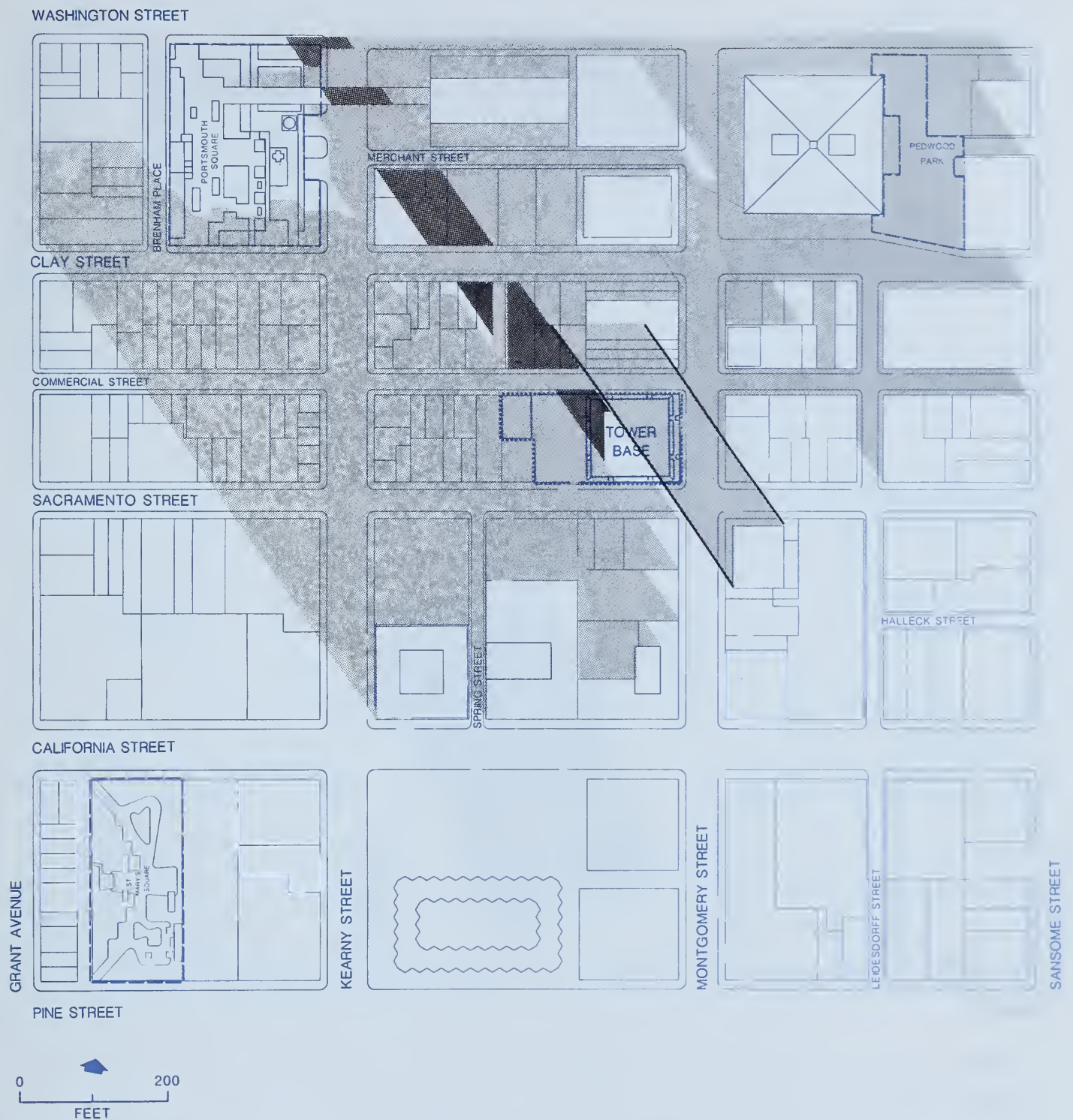


FIGURE 28

Shadow Pattern -
December 21, 9:00 A.M.
PST

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

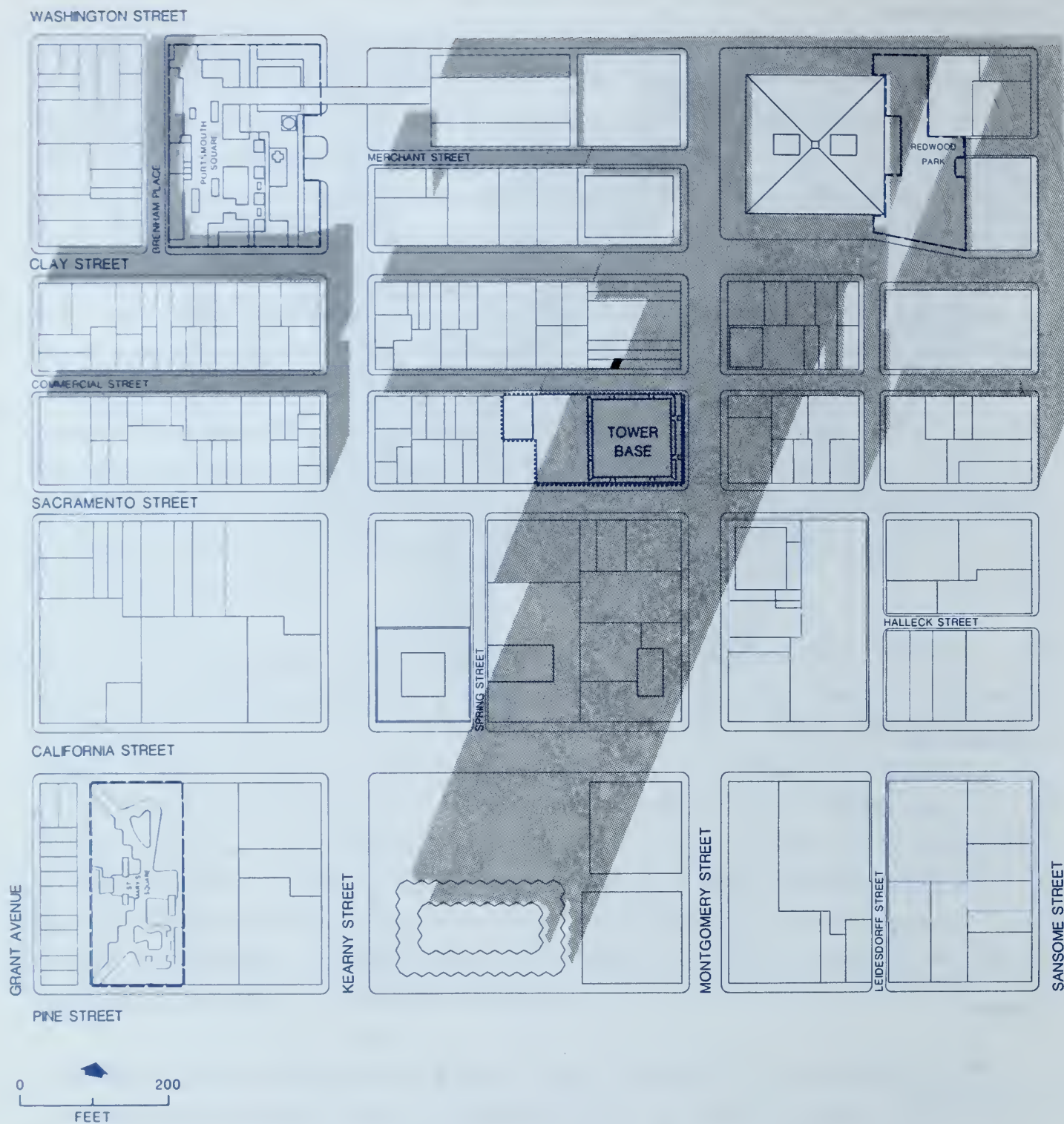


FIGURE 29

Shadow Pattern -
December 21, 1:00 P.M.
PST

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

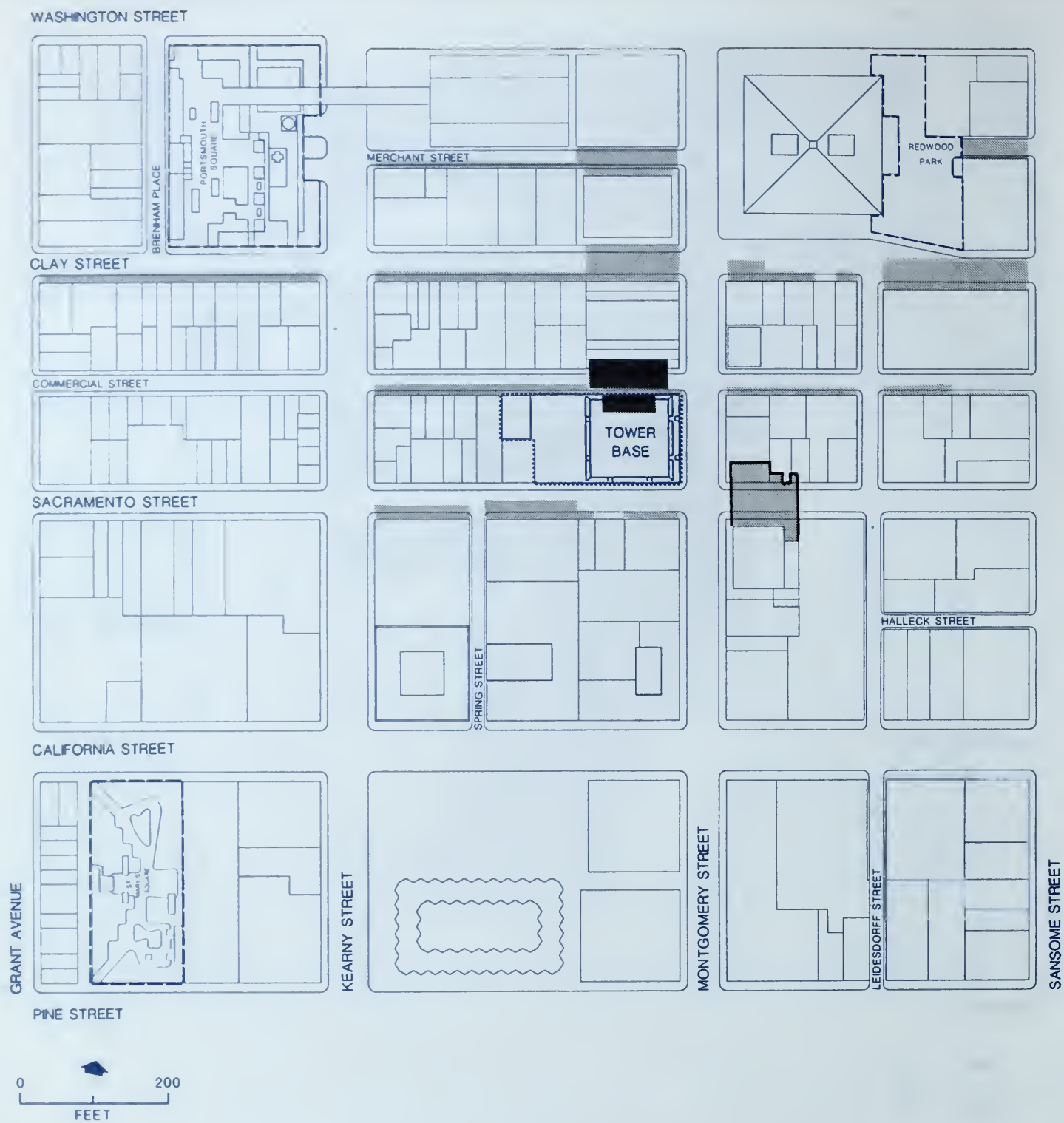


-  Existing Shadow
-  Under Construction Building Shadow
-  Project Shadow (New Shadow Only)
-  Project Site
-  Open Space

FIGURE 30

Shadow Pattern -
June 21, 9:00 A.M.
PDT

SOURCE
Skidmore, Owings & Merrill and Environmental Science Associates, Inc.



- Existing Shadow
- Under Construction Building Shadow
- Project Shadow (New Shadow Only)
- Project Site
- Open Space

FIGURE 31

Shadow Pattern -
June 21, 1:00 P.M.
PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

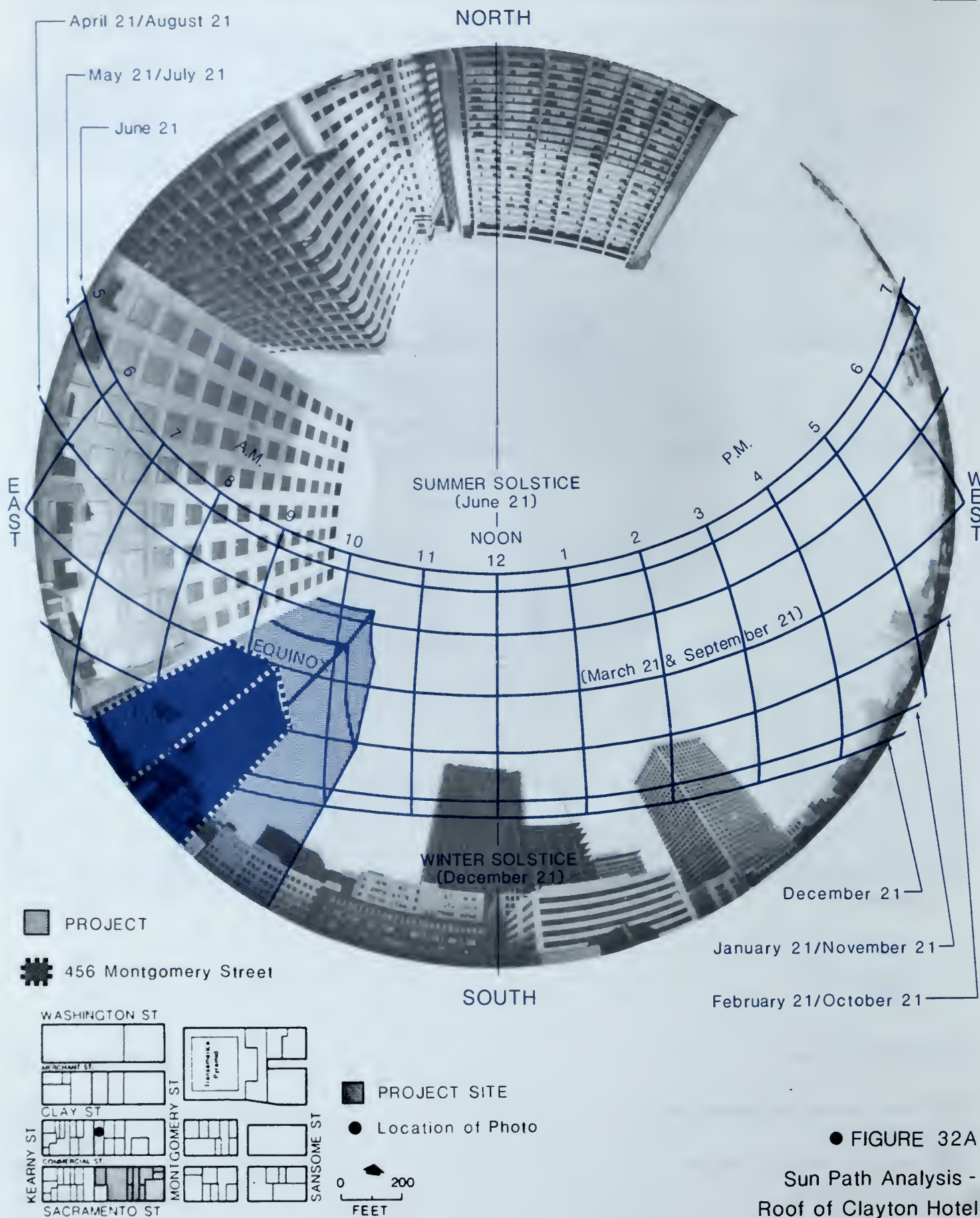


- Existing Shadow
- Under Construction Building Shadow
- Project Shadow (New Shadow Only)
- Project Site
- Open Space

FIGURE 32

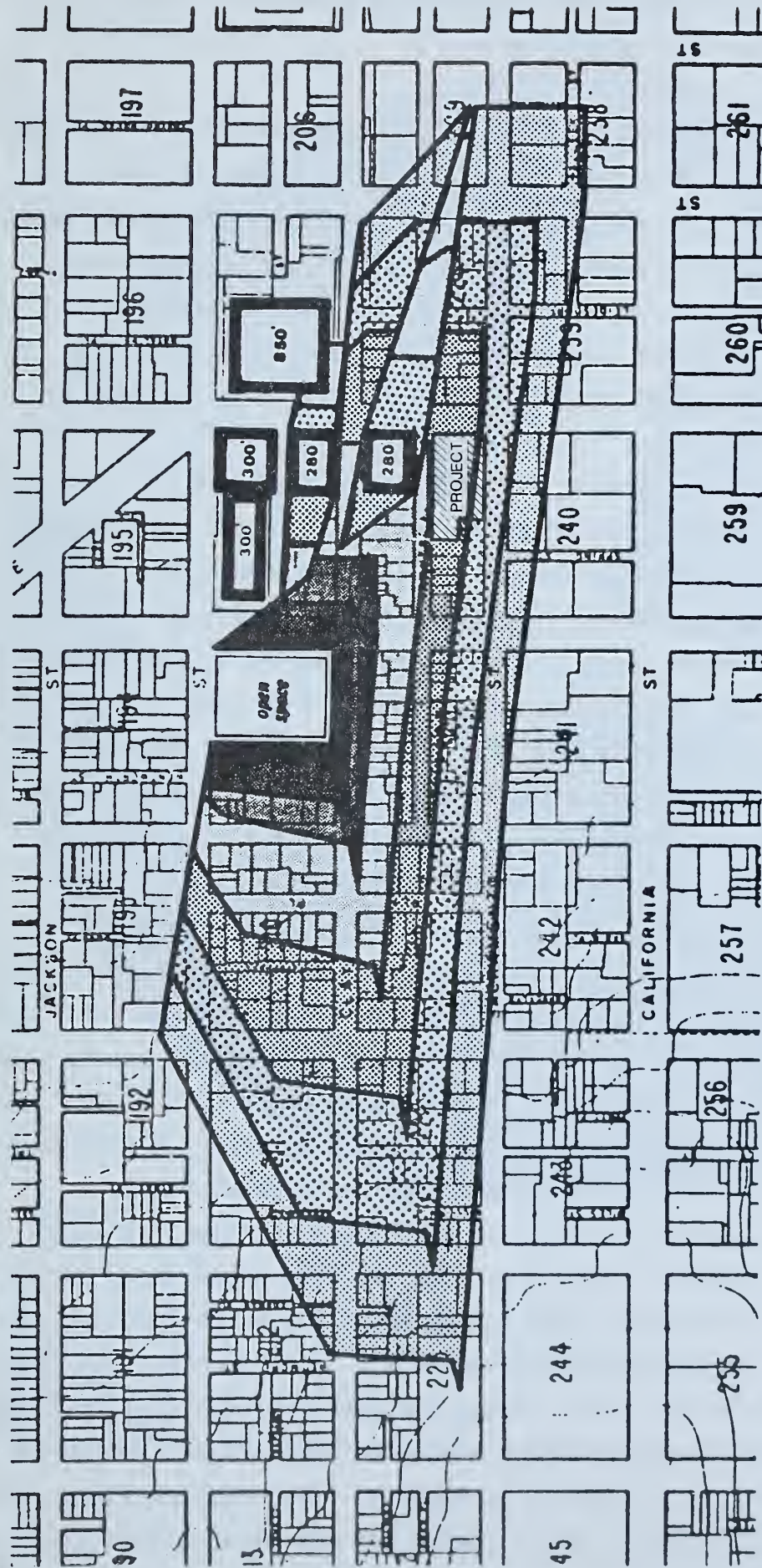
Shadow Pattern -
June 21, 4:00 P.M.
PDT

SOURCE
Skidmore, Owings & Merrill and Environmental Science Associates, Inc.



NOTE: Solar time from late April through late October would be one hour later due to Daylight Savings Time.


SOURCE: Environmental Science Associates, Inc.





CRITICAL TIME: 8:00 A.M. to 4:00 P.M. (Pacific Standard Time)
 9:00 A.M. to 5:00 P.M. (Pacific Daylight Time)


CRITICAL MONTHS: March 21 to September 21


 Buildings in conflict with Solar Fan


 Project Site


 OPEN SPACE

 50 FEET

 80 FEET

 100 FEET

 200 FEET

 300 FEET


 400 FEET



FIGURE 33
 Portsmouth Square Solar Fan

SOURCE:
 "Sun and Light for Downtown San Francisco"

the 350-ft. project tower on Portsmouth Square after 8:00 a.m. (8:48 a.m. Daylight Time) between March 21 and September 21.

The solar fan indicates certain existing and under-construction buildings that exceed the solar fan height limits (see Figure 33, p. 84). Because of the shadows cast by these buildings, the diagram would permit higher height limits nearby (i.e., where buildings at such locations would be within existing buildings' shadow). The diagram does not include the under-construction, 456 Montgomery St. building, which exceeds the solar fan limit of 300 ft. on part of its site, southeast of the project site.

A sky exposure analysis of the project, for an exposure location at Commercial St. and Montgomery St., is shown in Figure 34, p. 86. This figure also shows the effects of the Bank of Canton and 456 Montgomery St., both under construction. During the summer, the project tower would shade this location on Commercial St. from about 11:45 a.m. to about 1:30 p.m. Project tower shadows would occur at this location from about 11:30 a.m. to about 3:15 p.m. during the spring and fall (one hour later in Pacific Daylight Time). The project tower shadow would last longer, until about 4:00 p.m. during February and 5 p.m. during October. During the late fall and early winter, existing buildings on and near the site would shade this location.

The Downtown Plan proposes sun access requirements for parks, open space and sidewalk areas. One such area is Portsmouth Square. Critical times for maintenance of existing sunlight on Portsmouth Square are defined in the plan as 8 a.m. to 4 p.m., Standard Time, March 21 to September 21 (9 a.m. to 5 p.m., Daylight Time, after late April). The project as proposed (350 ft.) would shade parts of Portsmouth Square in mornings until about 9 a.m. (Standard Time) in early spring and about 10 a.m. (Daylight Time) in late summer. A 250-ft.-tall structure complying with the plan would shade parts of the southerly portion of Portsmouth Square from about 8 a.m. to 8:30 a.m. (Standard Time) in early spring and from about 9 a.m. to 9:30 a.m. (Daylight Time) in late summer. In such a case, shadow analyses must cover effects on Portsmouth Square, and the decision-makers would consider project design in relation to time, duration, and location of shadows. (See Section VII., Alternatives, p. 148, for a discussion of shadow effects of an alternative complying with the Downtown Plan.)

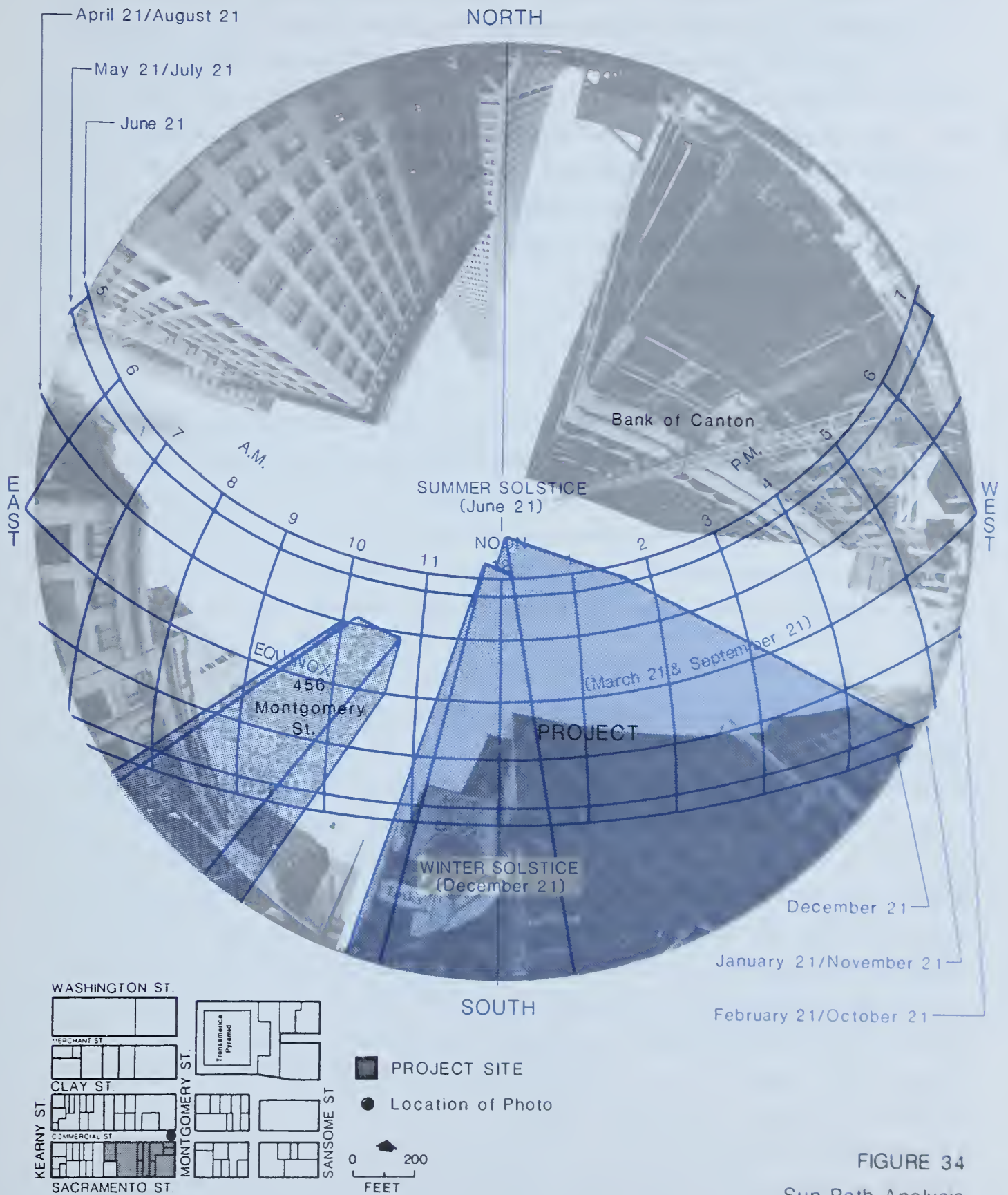


FIGURE 34
Sun Path Analysis

- The plan proposes to designate certain streets for mandatory sunlight access to sidewalks during midday hours. Kearny St., west of the site, is proposed as such a street, with sunlight access required on the east sidewalk from 11 a.m. (Standard Time), all year, and on the west sidewalk until 1 p.m., all year. The project would not add shade to Kearny St. sidewalks between 11 a.m. (Standard Time or Daylight Time) and 1 p.m. (Standard Time or Daylight Time) at any time during the year. As shown in Figures 23-25, pp. 73-75, and Figure 30, p. 81, the project would shade parts of Kearny St. sidewalks before 11 a.m. in spring, summer and fall.

WIND/4/

As noted in section III.C. Shadow and Wind, in San Francisco, the most frequent wind direction during most months is westerly (from the west). On an annual aggregate basis, west winds blow about half of the time. West winds are also the strongest, averaging over seven miles per hour (mph) year-round. Southwest winds are typically the second most frequent and second strongest winds. Northwest winds have the second highest average speed during some years.

Information on comfort of pedestrians under various conditions (e.g., sun exposure, cool and warm temperatures, light and heavy clothing, and various wind speeds) is provided by Lawson and Penwarden (1975). Penwarden (1973) suggests degrees of discomfort that are created by various wind speeds. For winds up to 4 mph, there is no pedestrian discomfort; for winds from 4 to 8 mph, wind is felt on the face. Winds from 8 to 13 mph will disturb hair, flap clothing, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise dust, dry soil, and loose paper and will also disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph the limit of agreeable wind on land is defined. From 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over. In view of the above information, a mean windspeed of 11 mph was selected as the comfort criterion and 25 mph as a hazard criterion.

Experiments to determine project-generated wind effects were performed for three prevailing wind directions (westerly, southwesterly and northwesterly) for the project and for alternatives. (Wind effects of alternatives are described in Section VII., Alternatives, pp. 146-156.) These wind directions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. In the wind tunnel, all hot-wire measurements were taken at the same series of surface points around the building site for all three wind directions. (See Appendix E, p. A-53.) The measured wind-tunnel wind speeds (ground level) are presented as mph in this report; thus, a wind speed given as 11 represents 11 mph, which corresponds to the comfort criterion. Hazard wind speeds were not encountered during the course of the study. The comfort criterion of 11 mph was exceeded, for existing and projected northwest wind conditions (which occur about 8% of the time) only at one location, the southwest corner of the base of the Transamerica Pyramid.

West Winds

For west winds, the existing near-surface wind speeds at all measured locations are below 8 mph and a majority of locations have wind speeds less than 5 mph. The highest existing west wind is on the eastern portion of Commercial St. adjacent to the project site, where wind speeds of 7.7 mph were recorded. Wind speeds of 7.1 mph on Clay St. between Kearny and Montgomery Sts. and 7.1 mph near the intersection of Montgomery and Clay Sts. were recorded. The project would increase west wind speeds on Commercial St. between the project and the Bank of Canton Headquarters, from the existing 5.1 to 9.2 mph. Wind speeds would increase from the existing 4.3 to 7.7 mph on Sacramento St. west of Montgomery St. Wind speeds would also increase along Montgomery St., from the existing 3.9 mph to 6.2 mph near Clay St. and from the existing 3.2 mph to 5.9 mph near Sacramento St. No wind speeds would exceed the 11 mph pedestrian comfort criterion.

Southwest Winds

Current southwest wind flows all are less than 9 mph near the site, with a majority of winds less than 6 mph. The highest existing southwest wind speed recorded was 8.8 mph on Clay St. Changes in wind speeds due to the project

would be less than 2.4 mph at all locations recorded; some wind speeds would be reduced by up to 1.4 mph. No wind speeds would exceed the 11 mph comfort criterion, although Clay St. between Montgomery and Kearny would experience an increase of 1.4 mph, from the existing 8.8 mph to 10.2 mph. These results appear to be due to the presence of large high-rise buildings, including the Bank of America headquarters, almost directly upwind of the building site, which reduces surface winds.

Northwest Winds

Existing pedestrian level northwest wind speeds range from 2.6 to 12.2 mph, the latter at the northeast corner of Montgomery and Clay Sts. (at the base of the Transamerica Pyramid). The majority of existing winds are below 7 mph. The project would increase northwest wind speeds at locations surrounding the site. There would be an increase from the existing 6.9 mph on Sacramento St. south of the site to 10.6 mph. Wind speeds on the south side of the Commercial/Montgomery Sts. intersection would increase from the existing 4.1 mph to 10.2 mph. At the northeast corner of the Montgomery and Clay Sts. intersection the project would reduce the speed from the existing 12.2 mph to 11.7 mph. This would be the only wind speed with the project that would exceed the 11 mph pedestrian comfort criterion.

NOTES - Shadow and Wind

/1/ The computer graphics are available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

/2/ Observations at Portsmouth Square were carried out by Environmental Science Associates, Inc., on April 7, 8 and 16, 1983, from 8 a.m. to 4 p.m. The data are available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

- /2a/ The Solar Center, February 6, 1984, "The Solar Center's System Performance Analysis (F-Chart Method) - Clayton Hotel."

/3/ Peter Bosselmann, "Sun and Light for Downtown San Francisco," Environmental Simulation Laboratory, University of California, Berkeley, April 1983.

/4/ This section is based upon a report entitled "Wind-Tunnel Studies of the 505 Montgomery Street Building", April 1983, prepared by Bruce White, Ph.D., as a subconsultant to Environmental Science Associates, Inc. and correspondence from Dr. White, dated September 3, 1983. Dr. White's information is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

E. TRANSPORTATION, CIRCULATION AND PARKING

DEMOLITION, EXCAVATION, AND CONSTRUCTION TRAFFIC/1/

During the estimated 19-month construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and construction activity. Demolition activity would require about six weeks and would generate an average of 20 truck movements per day in or out of the project site, between 9:00 a.m. and 4:00 p.m. Excavation would require 12 weeks and would generate an average of 20 truck movements per day in or out of the project site, between 9:00 a.m. and 4:00 p.m. Trucks would use Clay St. to reach the Embarcadero Freeway and would haul debris and excavation materials to a disposal site in South San Francisco. Construction activities (steel erection and finishing) would generate an average of 20 and a maximum of 60 truck movements per day during the 13-month period. Deliveries of materials would be distributed over the work day.

Construction truck access to the site is proposed from Sacramento St. or Commercial St. During the entire 19-month construction period, the approximately 120-ft. sidewalk on the north side of Sacramento St. would be closed; the curb lane would also be closed to provide a pedestrian detour. About half of the width of the Montgomery St. sidewalk along the project frontage would be closed during finishing activity. The adjacent curb lane on Montgomery St. would not be disrupted. The Commercial St. sidewalk along the project frontage would also be closed. Lane and sidewalk closures are subject to Department of Public Works and Muni review. Materials storage is proposed to be off-site, and would generate construction vehicle trips to the site. Temporary parking demand by construction workers' vehicles, and impacts on local intersections from construction worker traffic, would occur in proportion to the number of construction workers who would use automobiles.

The temporary closure of one traffic lane and sidewalk on Sacramento St. and of half the sidewalk on Montgomery St. would require temporary relocation of the Muni bus stops at those locations. The Sacramento St. stop would probably be moved from the west side to the east side of the Montgomery St.

intersection. The Montgomery St. stop (which was temporarily displaced from its original location by construction of the Bank of Canton Building) would probably be moved back (north) to its original location if construction of the Bank of Canton were completed in time or, if that building were still under construction, to the south side of the Sacramento St. intersection./2/

The impact of construction truck traffic would be a slight lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of trucks. Any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic, particularly at freeway access points. Lane blockage on Clay St. by queued trucks, if it were to occur, would reduce the capacity of this street. Blockage during times of peak traffic flow would have greater potential to create conflicts than during non-peak hours because of the greater peak-hour interaction between vehicles in adjacent lanes and vehicles moving around the queued trucks.

The Bank of Canton, 456 Montgomery St., 550 Kearny St., and 655 Montgomery St. (Washington/Montgomery Building), are currently under construction near the project site; the latter two buildings will probably be completed prior to the beginning of project construction. 580 California St. has been approved and is under construction.

Concurrent construction activities at the project site and at nearby sites would disrupt traffic and pedestrian flows by causing multiple lane closures, sidewalk closures, and street excavation. Each lane closure on Sacramento and Montgomery Sts. would reduce the affected street's capacity by about 33%. Because of varying construction schedules, however, the effect of construction at any one time would be lessened. Interior finishing work is being completed at 655 Montgomery St. Exterior finishing for the Bank of Canton is in progress, and the foundation work for 456 Montgomery St. is expected to start in late 1983. By the time demolition would start at the project site, the two buildings still under construction should be at stages that usually do not generate truck traffic that would compound the effects of the project.

Closing the curb lane on the north side of Sacramento St. (normally three lanes) for construction of the project would require rerouting of pedestrians and traffic along that street.

● TRAVEL DEMAND ANALYSIS

Project Travel Demand

On the basis of land use, the project would generate about 4,700 net new person trips-ends (pte) per day./3/ These figures include trips made by auto, public transit, and other modes. Travel generated by existing office and retail uses on the project site has been subtracted from the total new travel to give the net new travel from the site. Projected p.m. peak-period and peak-hour trips by mode expected to be generated by the project are shown in Table 5. About 800 new outbound trips would occur during the p.m. peak-period due to the project, of which, about 500 would occur in the p.m. peak hour./4/

Modal assignments have been made on the basis of future modal splits for the year 2000 contained in the Draft EIR for The Downtown Plan (EE81.3)./5/ The future modal splits have been applied to the project travel for the purpose of comparing project travel with future travel demand on the transportation system serving San Francisco. The modal splits used were derived from aggregate data for the C-3 District, the zoning district that contains the project site, and thus represent an average condition. The actual modal split for travel from the project may vary from the C-3 District average. However, because the travel demand forecasts used to derive the average modal split data include the travel from the project, application of the average modal split data to project travel has been assumed to be sufficiently accurate for purposes of comparison.

Cumulative Travel Demand

Analysis of the transportation impacts of cumulative development in San Francisco EIRs has been the subject of considerable public discussion. To date, cumulative analysis has been conducted on the basis of a list of proposed development in the greater downtown area (see Table C-2, Appendix C,

● TABLE 5: PROJECTED OUTBOUND TRAVEL DEMAND BY MODE FROM 505 MONTGOMERY (pte/a/)

<u>Travel Mode</u>	<u>P.M. Peak Period/b/</u>	<u>P.M. Peak Hour/b/</u>
Drive Alone	120	70
Car/Vanpool	130	100
Muni	210	110
BART	170	110
AC Transit	50	30
SamTrans	10	10
SPRR	20	10
GGT Bus	40	30
Ferry	10	--
Walk Only	30	20
Other	10	10
TOTALS (rounded)	<u>800</u>	<u>500</u>

/a/ Person trip-ends.

/b/ The peak hour occurs during the two-hour peak period of 4:00-6:00 p.m.

SOURCE: Environmental Science Associates, Inc.

pp. A-32a to A-32d, for the March 10, 1984 list of these projects). The Downtown Plan Draft EIR presents a refinement of the existing process by using projections of employment growth, independent of a list of proposed projects, to project future travel./6/

As discussed in Appendix J of the Downtown Plan Draft EIR, planned transit service improvements have been assumed to be implemented by the year 2000. These planned improvements would allow system capacities to keep pace with demand increases over time. The Downtown Plan Draft EIR analysis also assumes that regional auto use will continue to change over time in response to the increasing levels of congestion on the bridges and freeways serving the City. The analysis projects a shift from single-occupant auto use (drive alone) for commuting to ridesharing (carpool, vanpool), and to transit use.

IV. Environmental Impact

The travel data presented in the Downtown Plan Draft EIR transportation sections (and in this report) are projections of total demand on the transportation system serving San Francisco. The projections are comprised of three components of travel demand. Two of the components were developed through an intricate travel modelling process for the C-3 District of San Francisco. These first two components of travel demand are C-3 District work (employee journey-to-work) travel and C-3 District non-work (all other) travel. The third component is non-C-3 District travel which was forecast through an analysis of regional trends adjusted for the effect of development in the C-3 District.

Although the C-3 District modelling process used analytical techniques common to travel forecasting, several portions of the process are unique to the C-3 District. The uniqueness is the result of the development of two major data bases - an inventory of existing land uses in the district and surveys of employees and employers in the district. The data developed from the surveys and the inventory have been used as the basis for forecasts of development and employment growth in the C-3 District. Sections IV.B, Land Use and Real Estate Development; IV.C, Business and Employment; IV.D., Residence Patterns and Housing; and Appendices G, Land Use and Real Estate Analysis; H, Business and Employment Analysis; and I, Theoretical Discussion of Housing Market Effects/Methodology for Forecasting Residence Patterns, of the Downtown Plan Draft EIR, which contain detailed information about methods used to project future employment in the C-3 District, are incorporated by reference into this report. The employment projections in the Downtown Plan Draft EIR for the year 2000 exceed the maximum employment projected using the current list-based cumulative analysis, as the list cannot take into account projects not yet proposed. The employment forecasts have been used as the basis for the travel demand modelling process. As described above, the C-3 District travel comprised two of the three components of total travel. Because of the use of the employment projections in the travel demand modelling process, the transportation forecasts for the year 2000 are independent of lists of cumulative development.

IV. Environmental Impact

Through a complex calibration and validation process of comparing projections of travel demand modelled on the basis of the survey of C-3 District employees to actual travel from measurements made by state, city and regional agencies, work and non-work travel demand from the C-3 District was modelled for the years 1984, 1990 and 2000. The modelling process is comprised of the following steps:

- Trip generation rates (empirical measures of total travel to and from a specific land use) were applied to employment forecasts by business activity (i.e., different rates were used for various land uses).
- The total travel from the C-3 District was distributed to seven Bay Area zones on the basis of projections of future employee residence patterns and origin-destination patterns for non-work travel.
- Trips to each of the seven regional zones were assigned to travel modes on the basis of modal splits (distribution of travel over the transportation modes, auto, transit, etc.) developed from the C-3 District surveys.

At this stage of the process, the model forecasts total travel from the C-3 District. To complete the process and to allow analysis of the effect of travel demand from C-3 District development on the transportation network, the non-C-3 travel demand was analyzed. The total travel demand was calculated by summing C-3 District work and non-work travel and non-C-3 travel at sub-regional measuring points (called screenlines) located at or just beyond the San Francisco County Line (except for Muni and BART westbay service which were measured inside San Francisco, outside the downtown). The total travel demand was then compared to available service (capacity) at the screenlines and operating conditions (demand-to-capacity ratios) were analyzed assuming planned improvements. The results of those analyses are summarized later in this section.

For future years, the C-3 travel modelling process was modified to incorporate changes in travel patterns (modal split changes, different travel times), employee residence patterns and changes in land use patterns. The process

incorporates the dynamic aspects of changing Bay Area travel patterns, rather than assuming a fixed, unchanging condition over time. An example of past changes in travel patterns can be seen in the amount of carpooling activity on the Bay Bridge. In 1977, peak average vehicle occupancy westbound on the Bridge was 1.7 persons per vehicle. By 1983, in response to increasing congestion and increased travel and parking costs, peak average vehicle occupancy westbound increased to 2.1 persons per vehicle./7/ The non-C-3 travel demand was forecast through the use of growth factors developed on the basis of historic trends in regional and sub-regional travel./8/

The other process used to forecast cumulative transportation impacts starts with a list of cumulative office and retail development (net new office and retail space) proposed, approved or under construction in the greater downtown area. From that list, through the use of static employment densities for office and retail uses and established trip generation rates, forecasts of travel demand are made. The forecast travel is assigned to modes on the basis of static modal split factors (which are assumed not to change over time). The Transportation Guidelines for Environmental Impact Review: Transportation Impacts (Department of City Planning, September 1983, hereinafter Transportation Guidelines) describe the process and the data used to calculate transportation impacts from the list-based development.

The current list, shown in Table C-2, pp. A-32a to A-32d has about 19 million gross sq. ft. of net new office space and about 0.9 million gross sq. ft. of net new retail space. On the basis of the Transportation Guidelines analysis, the list-based development would generate approximately 80,000 p.m. peak-period person trip-ends, of which about 49,000 would occur in the p.m. peak hour. Table 5A shows a comparison of the projections of travel demand from the list-based analysis and from the Downtown Plan Draft EIR for the year 2000. While the list contains development both inside and outside the C-3 District, the Downtown Plan Draft EIR makes specific projections only for C-3 District development, and the travel components shown in Table 5A are for the C-3 District only; therefore, for purposes of comparison, travel from the C-3 component of the list (about 13 million gross sq. ft. of net new office space and 0.4 million gross sq. ft. of retail space) has been analyzed for comparison with the projections from the Downtown Plan Draft EIR for

IV. Environmental Impact

Alternatives 1 to 5 and the Downtown Plan. As shown in Table 5A, travel demand from the Alternatives in the Downtown Plan Draft EIR ranges from Alternative 1 (about 17% higher than the Downtown Plan) to Alternative 4 (about 5% lower than the Plan). Although there is a range, the spread is within the level of accuracy of the transportation analysis ($\pm 10\%$), and thus, statistically, the transportation impacts of the Alternatives are equivalent to those of the Downtown Plan.

Several anomalies are apparent in the data shown in Table 5A. While the C-3 component of the list would generate about half as much travel as do the Downtown Plan and the five Alternatives, the list-based analysis yields projected travel demands within San Francisco (inside and outside the C-3 District) that exceed those generated by the Downtown Plan and the Alternatives.

The difference in total travel results in part from the different frames of the list and the Downtown Plan Draft EIR. The Downtown Plan Draft EIR established 1984 as the baseline year and 1990 and 2000 as target study years. Estimates of growth were made on the basis of projections for each of the target years for the range of alternatives. In contrast, the projects included on the cumulative list span a period from 1984 to sometime in the early or mid-1990's when completion of all projects on the list or a similar amount of square footage would be expected./9/ Thus, results of impact analyses using these two forecasting methods are not directly comparable.

The variations in travel by trip purpose (work, other) and by travel mode (as shown in Table 5A) between the list-based method and the Downtown Plan Draft EIR method can be explained by differences in the methodologies and data bases used to forecast the travel demand. The list-based analysis employs single-use trip generation data to estimate total travel through the process of adding together the trip generation estimates from all the individual buildings on the list. These single-use trip generation rates do not incorporate any discounting factors to account for trips going from one building to another within the Downtown. Studies for the Downtown Plan Draft EIR have confirmed that there is considerable travel between land uses in the downtown area. Thus, the list-based analysis adds each trip as if it were a new trip in or out of the downtown.

● TABLE 5A: COMPARISON OF LIST METHOD AND ECONOMIC FORECAST METHOD - OUTBOUND P.M. PEAK-HOUR CUMULATIVE TRAVEL DEMAND FOR THE C-3 DISTRICT (person trip ends)

Mode of Travel	3/10/84 List/a/	Downtown Plan (1984-2000)/b/	Alternative 1 (1984-2000)/b/	Alternative 2 (1984-2000)/b/	Alternative 3 (1984-2000)/b/	Alternative 4 (1984-2000)/b/	Alternative 5 (1984-2000)/b/
Work Person Trip-ends	22,100	41,400	47,600	46,200	44,400	39,100	39,700
Other Person Trip-ends	8,200	12,100	14,700	14,200	13,400	11,800	11,800
Total Person Trip-ends	30,300	53,500	62,500	60,500	57,900	51,000	51,600
Muni Northeast	900	1,600	1,700	1,600	1,600	1,700	1,700
Northwest	3,700	1,800	2,000	1,900	1,800	1,800	1,800
Southwest	3,100	1,100	1,100	1,000	900	800	800
Southeast	600	1,100	1,000	1,000	1,000	600	700
BART Transbay	4,500	11,800	13,300	13,100	12,700	11,300	11,300
Westbay	1,900	2,400	2,800	2,700	2,600	2,300	2,300
AC Transit	1,700	200	600	500	300	-100	-100
GGT Bus	1,100	3,200	3,700	3,600	3,500	2,700	3,100
Ferry	300	800	800	800	800	800	800
SamTrans	300	1,200	1,300	1,300	1,200	1,000	1,100
SPRR/CalTrain	500	1,800	2,000	1,900	1,800	1,700	1,700
Regional Auto/c/							
Golden Gate Bridge	370	410	630	590	540	390	370
Bay Bridge	960	1,250	1,550	1,540	1,510	1,060	1,110
Bayshore Freeway (U.S. 101)	420	470	650	620	590	400	400
Interstate 280	420	470	650	620	590	400	400

/a/ Travel from only those projects on the list that are located inside the C-3 District. The list also contains development located in the greater downtown area outside the C-3 District; travel from those projects has been included in the list-based travel shown in the remainder of this section.

/b/ Travel from the C-3 District only. The analysis used in the Downtown Plan Draft EIR assumes growth in regional travel that is not shown above; it is discussed in the remainder of this section.

/c/ Vehicle trip-ends; calculation made on the basis of 2.7 persons per carpool and 1.2 persons per vanpool. Person trip-ends on transit cannot be added to vehicle trip-ends to obtain total person trip-ends because of the varying numbers of persons per vehicle.

SOURCE: Environmental Science Associates, Inc.

IV. Environmental Impact

The Downtown Plan Draft EIR travel demand model has refined the trip generation process by incorporating discounting factors that adjust the trip generation rates to give travel to and from the C-3 District as a whole; it does not include trips internal to the C-3 District. Thus, while the Downtown Plan Draft EIR process projects proportionately more work travel than does the list-based analysis, the Downtown Plan Draft EIR forecasts more closely resemble actual travel demand that would result from downtown development.

The differences in distribution of travel among modes (shown in Table 5A) are the product of refinements in the regional distribution and modal split analyses in the Downtown Plan Draft EIR process. The list-based analysis assumes a static (unchanging over time) regional distribution and static modal splits. The Downtown Plan Draft EIR analysis has incorporated changes in both the regional trip distribution (reflecting projected availability of housing) and the modal splits (reflecting projected availability of roadway and transit capacity in the future).

The list-based analysis yields more San Francisco travel (as shown by larger Muni numbers for the list-based analysis in Table 5A) than does the Downtown Plan Draft EIR analysis because the Downtown Plan Draft EIR analysis projects a declining availability of housing in the City. Thus, as the downtown work force increases, the percentage of workers living in San Francisco would decrease. The list-based analysis assumes that the percentage of workers living in San Francisco would remain constant over time and thus overestimates the numbers of future employees living in the City and underestimates the numbers of regional commuters.

Other differences in travel among the modes, particularly regional auto and AC Transit, are the result of the refined modal split process used in the Downtown Plan Draft EIR. As the list-based analysis assumes that modal split remains constant over time, the list-based analysis is insensitive to the abilities of transit agencies and regional roadway systems to serve future demand. The Downtown Plan Draft EIR analysis has assumed that the modal split would change over time in response to the increasing levels of congestion at the regional screenlines (described in the Downtown Plan Draft EIR). Thus, because the Bay Bridge is at or near capacity in the p.m. peak hour eastbound,

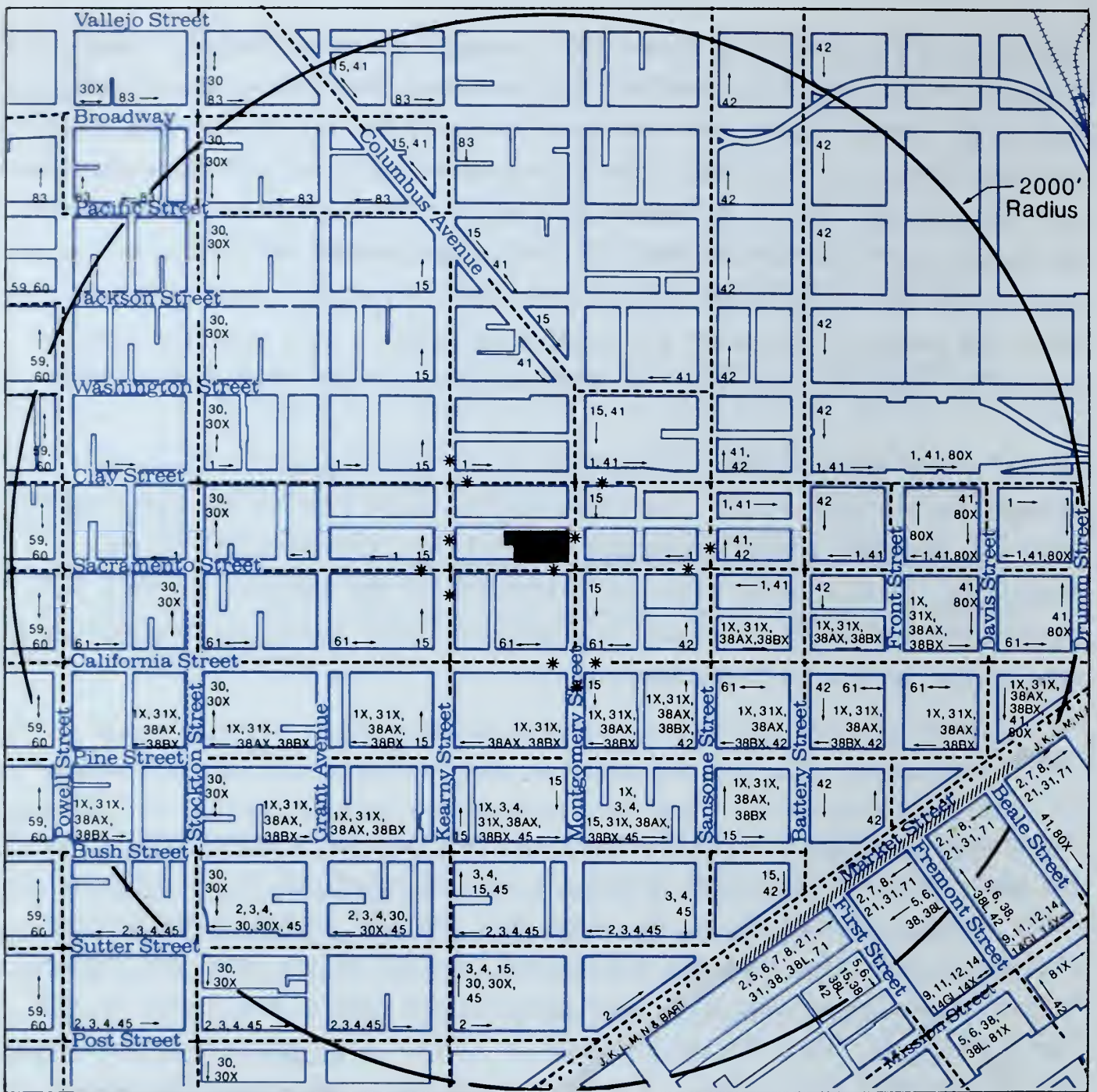
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the Downtown Plan Draft EIR modal split projects a proportionately lower increase in auto demand to the East Bay than does the list-based analysis. Similarly, for AC Transit the Downtown Plan Draft EIR recognizes that current regional transit policy dictates no increases in AC Transit transbay service and thus, the ability of AC Transit to carry additional riders transbay will be restricted in the future. Use of this changing modal split is a refinement that allows the travel model to more accurately forecast travel demand and thus, the Downtown Plan Draft EIR results represent a more accurate level of projection than has been possible using methods and data available to date.

Various other factors cause differences in the travel demand projections between the two approaches. The Downtown Plan Draft EIR and the Consultant's Report on Downtown Growth Management Alternatives (Environmental Science Associates, 1983) contain extensive discussion of the analyses and data used to forecast employment, land use (see sections cited above) and transportation demand (see Section IV.E and Appendix J).

● TRANSIT

The transit agencies serving downtown San Francisco carry approximately 60% of the peak-period employee work travel, as well as about 20% of the peak-period other travel. (Figure 35, p. 95, shows Muni and BART routes in the project vicinity.) P.M. peak-hour and peak-period loadings on the local and regional transit routes were found to be near capacity for some of the routes in 1984 (see Table 6, p. 96). The values shown in Table 6 are sums over the peak hour and the two-hour peak period. Within the peak hour, there would be periods of time when the loading ratios would be higher than those shown for the hour (peak-of-the-peak conditions). Individual transit vehicle loadings vary on a day to day basis because of fluctuations in ridership (demand) and because of variations in operating conditions caused by traffic congestion, equipment availability, and/or system breakdowns. Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix D, Figure D-1, pp. A-48 to A-50.



- | | | | |
|----------------------|-----------------------------|------------------|--------------------|
| J, K, L, M, N & BART | BART and Muni Metro Station | 1, 2, 3, J, K, L | Route Designations |
| //// | BART Route | — | Route Direction |
| | Muni Metro Subway Route | * | Bus Stop |
| ----- | Transit Route | ■ | PROJECT SITE |



FIGURE 35
Muni and BART Routes in Project Area

SOURCE:
San Francisco Municipal Railway Map, January 1982

● TABLE 6: OUTBOUND REGIONAL TRANSIT DEMAND AND LEVEL OF SERVICE

Transit Agency	1984				2000				1984 + CUMULATIVE LIST			
	Demand	P/S/a/	LOS/b/	Demand	P/S	LOS	Project Percent/c/	Rounded Demand	P/S	LOS	Project Percent/c/	
P.M. Peak Hour												
Muni												
Northeast	7,100	1.16	D	8,800	1.05	D	0.1	8,700	1.04	D	0.1	
Northwest	8,200	1.26	E	10,100	1.25	D	0.5	12,900	1.59	F	0.4	
Southwest	13,500	1.45	E	16,600	1.42	E	0.3	17,500	1.50	E	0.2	
Southeast	5,300	1.06	D	7,400	1.01	D	0.1	6,400	0.88	C	0.1	
BART												
Transbay	16,100	1.53	F	27,900	1.42	E	0.3	21,900	1.12	D	0.4	
Westbay	7,700	1.10	D	10,100	1.06	D	0.3	10,200	1.07	D	0.3	
AC Transit	9,100	0.94	C	10,500	1.08	D	0.3	11,300	1.16	D	0.2	
GGT Bus	5,300	1.00	C	8,500	0.91	C	0.3	6,800	0.73	B	0.4	
GGT Ferry	800	0.57	B	1,500	0.38	A	0.3	1,100	0.28	A	0.4	
Tiburon Ferry	200	0.40	A	300	0.60	B	0.3	200	0.40	A	0.4	
SamTrans	1,900	1.12	D	3,100	1.19	D	0.3	2,300	0.88	C	0.4	
CalTrain (SPRR)	3,100	0.61	B	4,900	0.79	C	0.3	3,800	0.61	B	0.3	
P.M. Peak Period												
Muni												
Northeast	12,600	1.06	D	15,500	0.95	C	0.2	15,200	0.93	C	0.2	
Northwest	13,100	1.13	D	15,300	1.05	D	0.5	20,600	1.41	E	0.4	
Southwest	23,300	1.31	E	28,700	1.29	E	0.3	29,800	1.34	E	0.3	
Southeast	9,100	1.00	C	12,100	0.88	C	0.2	11,000	0.80	C	0.2	
BART												
Transbay	25,800	1.54	F	44,100	1.40	E	0.3	35,200	1.12	D	0.3	
Westbay	11,300	0.80	C	14,600	0.77	C	0.3	15,400	0.81	C	0.3	
AC Transit	14,000	0.95	C	17,000	1.16	D	0.3	17,500	1.19	D	0.3	
GGT Bus	7,600	0.90	C	12,200	0.81	C	0.3	10,000	0.67	B	0.4	
GGT Ferry	1,000	0.56	B	1,700	0.33	A	0.3	1,500	0.29	A	0.3	
Tiburon Ferry	300	0.60	B	500	1.00	C	0.3	400	0.80	C	0.3	
SamTrans	2,900	1.12	D	4,500	1.15	D	0.3	3,600	0.92	C	0.4	
CalTrain (SPRR)	4,500	0.68	B	6,200	0.77	C	0.3	5,500	0.68	B	0.3	

/a/ Passengers per Seat is the ratio of total demand to seated capacity.

/b/ Level Of Service is scale ranging from A to F that relates P/S ratios to passenger loading conditions on transit vehicles.

/c/ The percent of demand generated by the project.

SOURCE: Environmental Science Associates, Inc.

IV. Environmental Impact

The level of service concept, similar to that developed for highway operations, has been applied to both bus and rail transit. Passengers per seat (i.e., total passengers divided by the number of seats) has been used as the measure of effectiveness to define the various level of service ranges. Table D-1, Appendix D, p. A-38, shows the relationship between Level of Service and passengers-per-seat ratios for bus transit systems.

During the p.m. peak hour in 1984, all of the transit agencies were found to be operating in Level of Service D or better with the exception of BART Transbay where conditions were found to be at Level of Service F, and Muni in the Northwest and Southwest corridors where operations were found to be in Level of Service E. Although BART is a rail transit service, its cars have a unique seating configuration. The ratio of total capacity to seated capacity for a BART car (about 1.5) is equivalent to the ratio for bus transit and, thus the bus transit Level of Service scale is applicable to BART. Level of Service F ("crush" or "jammed" loadings) on BART is in the range of 1.5 to 1.8 passengers per seat. Because BART operates on a centrally-controlled system, the "crush" loadings would not increase passenger loading times (which causes deterioration of service) as would be the case on a bus transit system; rather, the effects of "crush" loadings on BART would be reflected in increased passenger discomfort.

The rail transit Level of Service scale is based on typical light rail transit systems for which total capacity is about 2.0 to 2.2 times seated capacity. The rail transit Level of Service scale would be applicable to Muni Metro. Muni Metro provides about 50% of the seated capacity to the Southwest corridor. Because Metro vehicles can accommodate higher loadings (a ratio of 2.0 passengers per seat) than buses or trolleys (a 1.5 ratio), the Level of Service would be somewhat better than shown in Table 6. An exact estimate of Metro loadings is not possible without analysis of the Metro service separate from the remainder of Muni service to the Southwest; such analysis would be beyond the ability of the travel demand analysis to accurately predict over time.

IV. Environmental Impact

With regard to the Muni data presented in Table 6, the Muni routes have been aggregated on a corridor basis and thus include two-directional travel on some routes that serve the Northeast and Southeast corridors. The Muni numbers cannot be added over the corridors to get a total for the system. Neither can capacity be shifted from one corridor to another. For instance, capacity in the Northeast corridor depends, in large part, on capacity that serves the Southeast portion of the City. The 15, 19, 25, 30, 30X, 30AX, 30BX, 32, 41, 42, and 47 lines pass through the downtown in two directions. Service on the above lines is interdependent. Thus, increases or decreases in capacity on one of the above lines directly affect service in the opposite direction. Service to the Northeast and Northwest corridors are also interconnected as lines serving the Northwest must pass through the Northeast corridor and, thus, serve both areas. Muni ridership and capacity have been apportioned between both areas.

Passengers-per-seat ratios are only one measure of adequacy of service. The constraints of operating on heavily used streets in and around the downtown cause transit vehicle bunching, loss of running time and missed schedules, all of which reduce service, reliability, and ultimately, capacity. In some respects, this would not be evident from simple quantitative analysis. In addition to these inefficiencies inherent within the transportation system, there are other factors which would affect overall transit capacities. These include variability in daily and seasonal ridership for which an absolute capacity must be available, as well as transit riders who remain uncounted because their transit trips both start and end beyond the screenlines used in this analysis. Daily fluctuations in fleet availability also affect system capacity.

Further, policy considerations dictate operating conditions on certain lines where minimum headways have been established to maintain transit access to areas not warranted on the basis of ridership alone. When averaged together the ridership data from these lines may slightly distort overall ridership conditions.

IV. Environmental Impact

P.M. peak-period conditions on transit in 1984 were found to be equivalent to or better than peak-hour conditions. In some cases, where demand remains at peak-hour levels during the two-hour period, the passengers-per-seat ratios in the two-hour period are higher than in the one-hour period. This anomaly is the result of transit agencies providing express (or additional) service during the peak hour but not during the entire peak period. An example of this type of operation may be seen on BART, where three extra trains operate in transbay service in the peak hour but not in the rest of the peak period. Another factor involved is the distribution of demand (ridership) at uniformly high levels over the peak-period.

Both transit demand and capacity have been assumed to increase during the period 1984 to 2000. The discussion of transit capacity increases for each agency are based on the Five-Year Plans and Capital Improvement Plans of the various transit agencies and are discussed in Appendix J of the Downtown Plan Draft EIR, pp. J.25-J.26; this material which is discussed below and summarized in Table 6 is incorporated by reference.

Future transit demand and loadings for the Downtown Plan in the year 2000 and for 1984 plus the Cumulative List are shown in Table 6 for both the peak hour and the peak period. The total transit demand from the project would represent about 0.3% of the total travel demand on the transit carriers in the year 2000. Peak-hour transit demand on Muni in the year 2000 would increase about 25% over 1984 levels in the Northeast, Northwest and Southwest corridors. Muni demand in the Southeast corridor would increase about 40% between 1984 and 2000. Peak-hour demand on the other agencies would increase between 30% and 70% during the period 1984 to 2000.

Peak-period increases in demand would be between 15% and 70% from 1984 to 2000. Overall peak-period transit travel would be expected to increase about 30% between 1984 and 2000. Peak-hour and peak-period passenger loadings would be worse than in 1984, although most systems would operate in acceptable conditions (Level of Service D or better). However, BART Transbay and Muni to the Southwest would be in Level of Service E during the peak hour and the peak period.

IV. Environmental Impact

Although the data in Table 6 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. As shown in Table 5A, total transit demand under Alternative 1 would be about 12% higher than under the Downtown Plan while transit demand from Alternative 4 would be about 9% lower than the Plan.

It is important to note that the Five-Year Plan improvements for the transit systems are designed both to provide for future demand increases, and also to improve service levels from existing conditions. For new vehicles to expand system capacity rather than represent simple replacement, operating revenues would similarly need to be increased. During the year 2000 peak hour, Muni service to the Southwest and BART service Transbay would exceed the desirable passengers per seat ratios of 1.25 and 1.30, respectively./9a/ Although the transit demand in the two corridors in excess of the desirable loadings would be able to be accommodated under crowded conditions and thus would not be excess demand (that is, not beyond capacity), demand in excess of the desirable loadings would mean that additional transit service over that assumed to occur by 2000 would need to be provided to allow transit operations in the two corridors to meet the goals set by Muni and BART. To meet the goal of 1.25 passengers per seat in the peak hour, Muni would have to increase service by about 14% in the Southwest corridor over the amount of service assumed to occur in 2000. To meet the goal of 1.30 passengers per seat, BART would have to provide a transbay service increase of 14% over the amount of service assumed to occur by 2000.

Table D-5 shows three conditions: existing (1984) demand compared to 1984 capacity, and year 2000 conditions with the assumed capacity improvements both with and without cumulative development. Year 2000 conditions with the assumed capacity improvements and without cumulative development represent an unreal situation, in that the transit agencies would not implement all the improvements if development were to stop. That is, the agencies will add capacity only to the point where their service goals are met. The data in Table D-5 can be read to indicate the relative amounts of future capacity increases subsumed by future demand from cumulative development.

IV. Environmental Impact

If transit service were not increased beyond the amounts assumed to occur by the year 2000 in the Downtown Plan Draft EIR, transit operations (in terms of passenger comfort) would be slightly better than 1984 conditions. Peak-hour and peak-period passengers-per-seat ratios would be lower than 1984 ratios even though service (in some corridors) has been assumed to increase as much as 80% between 1984 and 2000.

Alternatively, if the Downtown Plan's Goals regarding increased transit use are achieved, and the proposals in the Plan regarding transit service improvements were to be fully developed and in place, the impacts on transit agencies would be less than described above. If the Goals were achieved, transit agencies would experience greater levels of demand than under this analysis but overall passenger loadings would be lower (and within desirable levels) because of increased transit service availability that would come about if the proposals stated in the Plan are developed. Section V, Mitigation Measures, p. 141, contains a measure that would provide the additional transit service required to mitigate the above impacts.

Also shown in Table 6, is an analysis of the conditions that would result from adding the travel from the Cumulative List to the 1984 base data, as is specified in the Transportation Guidelines. While not specifically comparable, these estimates calculated by adding the travel from the Cumulative List to the 1984 base data produce similar results to those from the Downtown Plan, although the overestimation of San Francisco travel is present in the list-based results, as explained above.

● PEDESTRIAN MOVEMENTS

The primary pedestrian entrance to the project would be on Montgomery St. and would provide access to the project lobby and elevators serving the upper-floor offices. Entrances to the ground floor retail space would be located on Montgomery, Sacramento, and Commercial Sts. The project would generate about 200 pedestrian pte during the noon 15-minute period, and about 140 pedestrian pte during the p.m. peak 15-minute period.

IV. Environmental Impact

Operating conditions on sidewalks and crosswalks have been categorized into a Pedestrian Flow Regimen, which relates density of pedestrians in a specific time period (pedestrians per foot of clear sidewalk width per minute) to quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk).^{9b/} Table D-2, p. A-39, shows the relationships between flow rates, walking speed, path choice, and interactions between pedestrians for each flow regime. Figure D-2, pp. A-51 - A-52, shows photographs of sidewalk conditions for each flow regime. Typically, an upper limit for desirable conditions is 14 pedestrians per foot per minute (p/f/m), defined as crowded, although conditions as high as 18 p/f/m, a congested condition, are possible with some conflicts among pedestrians.^{9b/} The "impeded" condition is in the center of the range of five desirable conditions (which range from "open" to "crowded").

Table 7 compares existing pedestrian flows with predicted pedestrian volumes on Sacramento St. at the intersection with Montgomery St. in the year 2000. Sacramento and Montgomery St. sidewalks currently operate in impeded conditions during the noon 15-minute period, and in unimpeded conditions during the 15-minute p.m. period. The crosswalk across Montgomery St. operates in impeded conditions during the noon period and in unimpeded conditions during the p.m. period. The crosswalk across Sacramento St. operates in impeded conditions during both the noon and p.m. periods.

Sidewalk operations in the year 2000 would be in the impeded range during both the noon hour and the p.m. peak hour. The project pedestrian traffic would represent about 20% of the pedestrian volumes on the Sacramento St. sidewalk during the noon hour and the p.m. peak hour. Pedestrian flows from the project would represent about 50% of the pedestrian volumes on the Montgomery St. sidewalk during the noon hour and about 40% during the p.m. peak hour. This increase in pedestrian traffic in the area might increase the number of pedestrians crossing Montgomery St. at the intersection with Commercial St., where there are no marked crosswalks. Such crossings would increase the potential for vehicle-pedestrian accidents at this location.

● TABLE 7: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN AT SACRAMENTO AND MONTGOMERY STREETS

	1984			2000			1984 + CUMULATIVE LIST		
	p/f/m/a/	Flow Regimen/b/	p/f/m	Flow Regimen	Project Percent	p/f/m	Flow Regimen	Project Percent	
				NOON PEAK/c/					
Sacramento St. Sidewalk/d/	2.5	Impeded	3.3	Impeded	17%	3.4	Impeded	17%	
Montgomery St. Sidewalk	2.1	Impeded	2.7	Impeded	50%	5.4	Impeded	25%	
Montgomery St. Crosswalk	2.7	Impeded	3.6	Impeded	21%	4.0	Impeded	19%	
Sacramento St. Crosswalk	3.7	Impeded	4.9	Impeded	26%	7.5	Constrained	17%	
				P.M. PEAK /c/					
Sacramento St. Sidewalk	1.7	UnImpeded	2.2	Impeded	10%	2.3	Impeded	10%	
Montgomery St. Sidewalk	1.7	UnImpeded	2.2	Impeded	43%	3.9	Impeded	24%	
Montgomery St. Crosswalk	1.7	UnImpeded	2.2	Impeded	24%	2.7	Impeded	20%	
Sacramento St. Crosswalk	2.5	Impeded	3.2	Impeded	28%	4.7	Impeded	19%	

/a/ Pedestrians per Foot of effective sidewalk width per Minute.

/b/ See Table D-2 for description of pedestrian flow regimens.

/c/ Peak 15-minute periods.

/d/ All sidewalk segments and crosswalks are along project frontage.

SOURCE: Environmental Science Associates, Inc.

The crosswalks at the intersection of Sacramento and Montgomery Sts. would operate in the higher ranges of impeded conditions during the noon hour in the year 2000. During the p.m. peak hour, the crosswalks would operate in the middle range of impeded conditions. The project pedestrian flow in the Montgomery St. crosswalk would be about 20% to 30% of the overall flow during both the noon hour and the p.m. peak hour.

Although the data in Table 7 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. Although not shown in Table 5A, pedestrian travel demand is closely related to total travel demand because the majority of trips on the primary modes shown in Table 5A begin or end as pedestrian trips at a building. Thus, on the basis of total travel demand, Alternative 1 would be about 17% higher than the Downtown Plan while Alternative 4 would be about 5% lower than the Plan.

Also shown in Table 7 are the results of adding travel from the Cumulative List to the 1984 base data. While the results appear to be similar to those from the Downtown Plan Draft EIR, the list-based results are not comparable for the reasons stated above, particularly because the list-based travel would occur sooner than the year 2000.

● TRAFFIC

The analysis of traffic impacts has been conducted on two levels; one level of analysis considered impacts at the regional screenlines, the second level of analysis considered impacts at intersections in and near the downtown.

Analysis of traffic conditions at the regional screenlines has been conducted for both the p.m. peak hour and the two-hour p.m. peak period. A.M. peak traffic conditions at the regional screenlines have the effect of metering the amount of traffic that reaches the downtown from outside of the City. This analysis has considered p.m. peak conditions. P.M. conditions are usually most severe on both freeways and streets within San Francisco, whereas a.m. peak conditions are most severe at locations outside of the City.

IV. Environmental Impact

Traffic demand at the regional screenlines in 1984 (see Table 7A, p. 100b) during the p.m. peak hour were found to use between 90% and 100% of the available capacity on the freeways and bridges. Although the capacity of the Bay Bridge is calculated to be 9,000 vehicles per hour (vph), the 1984 peak-hour demand shown in Table 7A represents the effective capacity. The demand figures shown in Table 7A for 1984 for the one-hour and two-hour periods are averages of several days and, thus, values for individual days may be different than the average.

Peak-hour freeway operating conditions in 1984 were found to be generally in Level of Service D to E conditions which would indicate unstable flows in the 35 mph to 45 mph range. Table D-4, Appendix D, p. A-42, shows the Level of Service for freeway operations. Peak-of-the-peak conditions within the peak hour would be expected to be worse than the hourly conditions because of surges in traffic demand during the peak hour. Conditions during the peak-period at the screenlines would be similar to those experienced during the peak-hour.

As shown in Table 7A, demand during the peak hour in the East Bay and Peninsula corridors would be expected to increase about 15% between 1984 and 2000. Peak-hour demand in the North Bay corridor would increase by about six percent between 1984 and 2000. The project travel demand, about 110 p.m. peak-hour vehicle trip ends, would represent about 0.1% of the total demand in each corridor in the year 2000. Both the East Bay and Peninsula corridors would have excess peak-hour demand that would not be met during the peak period./9c/ The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or incentives be provided.

● TABLE 7A: OUTBOUND REGIONAL AUTO DEMAND

<u>Regional Auto Corridor</u> <u>P.M. Peak Hour</u>	<u>Capacity</u>	<u>1984</u> <u>Volume</u>	<u>2000</u>		<u>1984 + CUMULATIVE LIST</u>	
			<u>Demand</u>	<u>Project Percent</u>	<u>Demand</u>	<u>Project Percent</u>
Bay Bridge (I-80)	9,000	8,540	9,790	0.2	9,480	0.2
Golden Gate Bridge (US-101)	7,200	6,740	7,150	0.1	7,100	0.1
US-101 (south of Harney Way)	8,000	7,390	8,400	0.1	7,800	0.1
I-280 (between Alemany Blvd. and San Jose Avenue)	8,000	7,610	8,650	0.1	8,020	0.1
<u>P.M. Peak Period</u>						
Bay Bridge (I-80)	18,000	17,880	19,330	0.1	18,460	0.1
Golden Gate Bridge (US-101)	14,400	13,870	14,850	0.1	15,380	0.1
US-101 (south of Harney Way)	16,000	14,200	16,530	0.1	14,870	0.1
I-280 (between Alemany Blvd. and San Jose Avenue)	16,000	13,620	15,890	0.1	17,290	0.1

SOURCE: Environmental Science Associates, Inc.

IV. Environmental Impact

Operating conditions at the regional screenlines would be at or near capacity in Level of Service E. Traffic flow conditions would be expected to be very unstable and could experience temporary flow interruptions throughout the peak-period. Peak-of-the-peak conditions would be prevalent during the peak hour and may extend into the peak period.

As shown in Table 7A, the list-based cumulative analysis, while not comparable to the year 2000 data, produces similar estimate of future demand. The results reflect the tendency of the list-based method to overestimate regional auto travel.

The streets that serve the project as feeders to or from freeway ramps (Clay and Washington Sts.) are points of maximum automobile traffic congestion in the Financial and Downtown Districts. Conditions on these streets were assumed to represent the "worst case" or greatest traffic impacts of the project.

Impacts from the project on other streets would be less, because project traffic on them would be more dispersed. Routes of drivers going to garages were assumed to be sufficiently dispersed so that they would have no measurable effect on traffic volumes on the streets adjacent to the project. Project impacts at the intersections closest to the project site would result primarily from service-vehicle and pedestrian traffic and from traffic using the proposed 23 on-site parking spaces. The traffic volumes from the project would not be detectable against the background of future traffic growth from development in the downtown at the intersections adjacent to the project.

Traffic operations at intersections near freeway ramps serving the project site vicinity are shown in Table 8, p. 102. During the a.m. peak hour, the intersection of Battery and Washington Streets operates in Level of Service B conditions. The intersection of Battery and Clay Streets has Level of Service C conditions during the p.m. peak hour. Level of Service descriptions are shown in Table D-3, p. A-41.

Peak-hour conditions would be expected to deteriorate at both of the intersections by the year 2000. Expanded areas of traffic congestion would disrupt surface Muni operations. If the mitigation measures for transportation are implemented, the intersection operating conditions would be improved.

● TABLE 8: PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS)/a/

Intersection	1984		2000		1984 +CUMULATIVE LIST	
	V/C	LOS	V/C	LOS	V/C	LOS
Battery & Washington Sts./b/	0.65	B	0.71	C	0.79	C
Battery & Clay Sts.	0.73	C	0.85	D	0.83	D

/a/ Level of Service descriptions and relationship to V/C ratios are shown in Table D-3.

/b/ Data for this intersection is for the a.m. peak hour because Washington St. carries traffic from an off-ramp from the Embarcadero Freeway. During the p.m. peak hour, volumes on Washington St. are less than half the a.m. peak hour volumes.

SOURCE: Environmental Science Associates, Inc.

As shown in Table 8, the list-based analysis yields similar Level of Service intersection conditions. While similar to the results of the Downtown Plan Draft EIR results, the list-based results are not comparable for the reasons stated above, particularly because the list-based analysis overestimates auto use through the assumption of an unchanging modal split.

Although the data in Table 7A and Table 8 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. As shown in Table 5A, regional traffic demand under Alternative 1 would be about 34% higher than under the Downtown Plan while regional traffic demand from Alternative 4 would be about 13% lower than the Plan.

● PARKING

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District./9d/ The short-term parking demand, while representing about 25% of the equivalent daily demand, is about 65% of the daily vehicle travel. Although the equivalent daily demand would leave about 10% of the parking supply vacant, surges in short-term demand (more travel in one period than in another period) can cause temporary localized overloads of parking facilities within various portions of the downtown, even though parking may be available elsewhere in the downtown.

The project would provide 23 on-site parking spaces and would not remove any existing spaces. The proposed parking spaces would be located in the basement level, with access from Sacramento St. via a 12-foot-wide one-way, signal-controlled ramp. The project would create a long-term parking demand of 230 spaces and demand for 10 short-term spaces for a total demand of about 240 equivalent daily spaces. There would be an on-site deficit of about 220 spaces.

The City Master Plan discourages new parking facilities and encourages the conversion of long term spaces to short term use. The project would be not consistent with the policy to provide only replacement parking as new parking would be provided by the project. If the project were to provide only short-term spaces the project would be in conformance with the policy to provide only short-term parking in the Automobile Control Area (Transportation Element, Downtown Transportation Plan, Policies 2, 3, 6 and 8, pp. 39-41).

The Downtown Plan "encourage[s] short-term use of existing parking facilities within and adjacent to the downtown core by converting all-day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low" (Downtown Plan, p. 133). The project would be consistent with this policy to the extent that short-term parking were provided on the site.

IV. Environmental Impact

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent less than 1% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 6,000 spaces in the year 2000 if vehicular demand occurs as projected. However, as shown in Table 7A, the analysis for the year 2000 forecasts excess auto demand in the peak hour and the peak period. If the excess demand is accommodated on transit or ridesharing; then the overall parking demand would decrease from the above estimate by about 2,300 spaces.

Alternatively, if the Goals of the Downtown Plan are met, total parking demand in the year 2000 would be about 48,100 equivalent daily spaces, an increase of six percent over 1984. If the Goals were achieved, there would not be a parking deficit.

The list-based analysis shows future demand for 11,400 spaces from projects in the C-3 District, which would be a total demand of 56,700 spaces. While similar to the 58,000 space (unmitigated) demand from the Downtown Plan, the list-based demand is not comparable for the reasons stated above, in particular because the list-based analysis assumes a static modal split and thus overestimates future auto demand.

Although the parking demands discussed above are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan Draft EIR. Although not shown in Table 5A, parking demand from the C-3 District under Alternative 1 would be about 4% higher than under the Downtown Plan, while Alternative 4 would be about 1% lower than the Plan.

TRANSPORTATION POLICIES OF THE MASTER PLAN

The project would relate to several objectives and policies of the Transportation Element of the San Francisco Master Plan./10/ General Objective 1, Policy 6 states "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies." The project sponsor has agreed to participate in legally adopted funding measures for Downtown transit funding, proportional to demand created by the project. Policy 7, "seek means to reduce peak travel demand," would relate to project plans for a transportation broker to encourage "flex-time," transit and carpools and vanpools. Downtown Transportation Plan Objective 1, Policy 2, "provide additional short term parking facilities in peripheral locations around but not within the downtown core," and Policy 3, "discourage the addition of new long-term parking spaces in and around downtown," would conflict with project plans to provide 23 parking spaces on the site. The project would respond to Objective 2, Policy 2, "minimize obstruction to through pedestrian movement on sidewalks in the downtown core," by providing improvements on Commercial St. consistent with the Center City Pedestrian Circulation Study./11/

TRUCK DELIVERIES AND LOADING

Table 9, below, shows total service-vehicle travel and average hourly service-vehicle demand for the project, based upon data published in Center City Circulation Program: Pedestrian Circulation and Goods Movement./11/ The new building would generate about 70 service-vehicle stops per day. Average hourly loading space needs are given in terms of spaces per hour per 10,000 gross sq. ft. of building space; average demand for the project would be 3.5 spaces per hour and peak hourly demand would be 4.4 spaces.

Two loading spaces, one 35 ft. in length and one 25 ft., are proposed, to be located on the Sacramento St. side of the project with one 36-ft. wide curb cut, the maximum curb-cut width permitted./12/ Overhead height in the loading area would be at least 14 ft. 6 in. The curb cut would also serve the basement parking area. The parking level would be reached via a one-lane ramp. Traffic on the ramp would be controlled by a signal to be installed as part of the project.

TABLE 9: PROJECTED SERVICE-VEHICLE TRAVEL ATTRIBUTABLE TO THE PROJECT/a/

Use	Space (GSF)/b/	Daily Stops/ 10,000 sq.ft. of GSF/b/	Daily Stops	Spaces/Hour/ 10,000 sq.ft. of GSF/b/	Average Spaces/ Hour
Office	327,250	2.1	69	0.1	3.3
Retail	9,900	3.0	<u>3</u>	0.2	<u>0.2</u>
TOTALS			72		3.5

/a/ Service-vehicle travel has been included in total travel calculated for the project.

/b/ Gross square feet of floor space.

SOURCES: Environmental Science Associates, Inc.; Department of City Planning, 1980, Center City Circulation Program.

The City Planning Code (City and County of San Francisco, 1979) specifies in Section 152, Article 1.5 that the amount of floor area proposed for the project would require the provision of two off-street loading spaces; the project would comply with this requirement. City Planning Commission Resolution No. 9286 (January 21, 1982) states the intent of the Commission to require adequate off-street loading. The Resolution requires projects to provide, as mitigation, loading space in compliance with Exhibit A of the Resolution. (The criteria of that exhibit are based on the same calculations shown in Table 9.) This project would be required to provide, as mitigation, three off-street loading spaces, each 35 ft. in length./13/

The potential for pedestrian-vehicle conflicts would be increased by the service-vehicle traffic from the project crossing the Sacramento St. sidewalk. Pedestrian volumes on Sacramento St. are low, so the impact of the project service-vehicle traffic would not be as great as it would be in a more heavily traveled pedestrian area.

Analysis of the design of the proposed Sacramento St. loading/service area indicates that standard single-unit trucks would be able to enter the loading area by backing in from a westbound position on Sacramento St., as required by Department of Public Works standards. There would be insufficient maneuvering

- room to allow trucks to turn around on-site. Trucks backing from Sacramento St. into the project loading area could delay movement of trolley buses of the 1-California line operating westbound on Sacramento St., and using the bus stop on the project frontage east of the proposed loading area driveway.

The service elevator in the loading area would connect with the office floors, and would be located in a separate utility core. Building directories and signs for the service elevators would be placed in the loading area. No access to the lobby or retail areas would be provided from the service elevator. Service vehicles for these areas would use the on-street loading zones on Montgomery St. Vehicles currently use the Montgomery St. commercial zones to serve the existing retail and office uses on-site. As a large portion of the existing retail uses would be replaced by the project, the existing number of on-street loading spaces on Montgomery St. should be sufficient to handle the demand from the project retail space as well as the existing uses that would remain.

The project would include on-site storage for trash containers. Containers would not be placed on streets or sidewalks except during actual trash pickup. The project would provide containers to collect and store recyclable solid wastes (such as glass, metal, computer cards, and newspaper) and the project sponsor would contract for recycling service.

NOTES - Transportation, Circulation and Parking

/1/ Construction data are from Theodore Smith, Dinwiddie Construction Co., letter, March 21, 1983, and telephone conversation, April 8, 1983.

/2/ Carl Natvig, Planning Division, Muni, telephone conversation, April 8, 1983.

- /3/ San Francisco Department of City Planning, Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September 1983. This document describes the procedure used to calculate travel demand from the project. Trip generation rates of 18.1 person trip-ends (pte) per 1,000 gross sq. ft. of office space and 150 pte per 1,000 gross sq. ft. of retail space were used to generate travel from the project. The two trip generation rates

are for independent land uses. When used to generate travel from more than one land use on the same site the rates may overestimate total travel to the site since a portion of the travel from each of the land uses may occur between land uses on the site and not leave the site. Such trips are referred to as "linked trips." The September 1983 Transportation Guidelines are on file and available for public review at the Office of Environmental Review, 450 McAllister Street, Fifth Floor.

- /4/ The percentage of travel occurring in the peak period and the peak hour are from the Transportation Guidelines (see Note 3). Total travel during each of the periods has been adjusted to show only outbound (leaving the downtown area) travel. The outbound travel consists of all of the work-related travel and half of the other (non-work) travel.
- /5/ San Francisco Department of City Planning, Office of Environmental Review, Draft Environmental Impact Report for The Downtown Plan, EE81.3, March 16, 1984. This document is an analysis of projected growth in the C-3 District to the year 2000 under the Downtown Plan and five alternatives. The transportation analysis in the Draft EIR includes projections of future modal splits for work and other (non-work) travel for the p.m. peak period, peak hour and daily time periods. This document is on file with and available for public review at the Department of City Planning, 450 McAllister Street, Fifth Floor.
- /6/ The Downtown Plan Draft EIR contains about 50 pages of text devoted to the description of transportation impacts in the greater downtown area, as well as an additional 30 pages of text describing transportation mitigation measures. The information in this EIR on the 505 Montgomery Street project is not intended to be a comprehensive summary of the transportation analysis in the Downtown Plan Draft EIR, but summarizes portions relevant to the 505 Montgomery Street project and its contribution to cumulative impacts. For details and assumptions used to arrive at the data and results presented in the Downtown Plan DEIR, see Sections IV.E, Transportation Setting and Impact, and V.E, Transportation Mitigation, and Appendix J, Transportation and Circulation Analyses and Methodologies, of the Downtown Plan Draft EIR, which are incorporated by reference into this report and summarized in the text as appropriate.
- /7/ Data are from Traffic Survey Series A-48 and MA-50, Spring 1977 and Spring 1983, Metropolitan Transportation Commission.
- /8/ The analysis of historic trends in travel patterns is from the following sources: Metropolitan Transportation Commission, Travel Observations of the Bay Bridge Corridor, October 21, 1981. Homburger and Dock, Trends in Traffic Patterns at the Bay Bridge and Caldecott Tunnel, U.S. Department of Transportation, DOT-BIP-WP-32-3-77, July 1977; telephone survey of 500 drivers conducted in April 1980 by Golden Gate Transit, data supplied by Alan Zahradnik, Transportation Planner, on February 16, 1983; Office of the Auditor-Controller, Comparative Record of Traffic for the Month of November, May 27, 1937 through November 30, 1982, Golden Gate Bridge, Highway and Transportation District; San Francisco Municipal Railway Planning Division, Projections of Future Muni Demand and Vehicle Requirements, October 1982; San Mateo County Transit District, Samtrans Five-Year Transportation Development Plan: 1983-1988, April 1983; California Department of

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Transportation, CalTrain Caltrans/Southern Pacific Peninsula Train Service Five-Year Plan 1983-1988, July 1983; and Traffic volume counts from Department of Public Works, Bureau of Engineering, Division of Traffic Engineering and from 1983 San Francisco Cordon Count, JHK and Associates, July 1983.

- /9/ See Downtown Plan Draft EIR, pp. II.9-II.11, for a comparison of the cumulative list projections with those of the Downtown Plan Draft EIR.
- /9a/ San Francisco Municipal Railway, Short-Range Transit Plan 1983-1988, July 1983. Bay Area Rapid Transit District, Short Range Transit Plan for the Five-Year Period July 1983 Through June 1988, August 1983.
- /9b/ Pushkarev and Zupan, Urban Space for Pedestrians, MIT Press, 1975, p. 85-117
- /9c/ Table IV.E.4, p. IV.E.36, of the Downtown Plan Draft EIR contains discussion of the implications of excess demand at the regional screenlines.
- /9d/ The parking survey data and other supporting calculations and data used in the Downtown Plan Draft EIR transportation impact analysis are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, Fifth Floor.
- /10/ San Francisco Department of City Planning, January 1983, Transportation, an Element of the Master Plan.
- /11/ San Francisco Department of City Planning, 1980, Center City Circulation Program: Pedestrian Circulation and Goods Movement, Working Papers 1, 2 and 3, and Final Report.
- /12/ City and County of San Francisco Department of Public Works, Order 62850, January 22, 1963, Standard Requirements for Automobile Driveways.
- /13/ City and County of San Francisco, Exhibit A, Off-Street Freight Loading and Vehicle Space Requirement and Guidelines, January 1982, City Planning Commission Resolution No. 9286.

- F. AIR QUALITY

Upon completion, the project would affect air quality in two ways: emissions would be generated by project-related traffic and by combustion of natural gas for space and water heating. Transportation sources would account for over 95% of project-related emissions. Projected daily emissions of pollutants in 1990 from project-generated traffic, and from cumulative development traffic, based on the March 10, 1984 list of Cumulative Office Development in Downtown San Francisco (see pp. A-32a to A-32d), are shown in Table 10, p. 109a. These emissions are also compared in the table to emissions projected for C-3

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District development by the Downtown Plan Draft EIR, and to total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan.

TABLE 10: PROJECTED DAILY POLLUTANT EMISSIONS

Pollutant	Project 1990	Emissions (tons per day) /a/				
		Cumulative List 1990/b/	Downtown Plan/c/		Bay Area/d/	
			1990	2000	1990	2000
Carbon Monoxide	0.120	17.0	6.8	6.6	1,952	1,883
Hydrocarbons	0.010	1.4	0.6	0.6	428	428
Nitrogen Oxides	0.012	1.8	0.8	0.8	558	610
Sulfur Oxides	0.002	0.2	0.1	0.1	194	233
Particulates	0.018	2.7	1.1	1.3	562	649

/a/ Project, Cumulative List, and Downtown Plan emissions calculated using BAAQMD, EMFAC6C vehicular emission factors. Emissions of CO, HC, and NO_x include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust entrained from roadway surfaces.

/b/ Incremental emissions of downtown-area development based on list of projected Cumulative Office Development in Downtown San Francisco as of March 10, 1984, Table C-2, pp. A-32a - A-32d.

/c/ Incremental emissions of C-3 District development, per Downtown Plan Draft EIR, Table IV.1.2, p. IV.1.12.

/d/ Accumulative total emissions of Bay Area development, per ABAG, BAAQMD, MTC, 1982 Bay Area Air Quality Plan, pp. 42, 53, and 112.

SOURCE: Environmental Science Associates, Inc.

Motor vehicle trips associated with downtown development would emit more nitrogen oxides (NO_x) than hydrocarbons (HC), both of which are chemical precursors of ozone, while emissions from building natural gas combustion would consist primarily of NO_x. On the basis of the LIRAQ ozone simulations conducted for the 1982 Bay Area Air Quality Plan, NO_x emissions in excess of HC emissions could lead to a slight decrease in peak ozone concentrations in the Bay Area. This relationship between NO_x and HC emissions would hold both under the cumulative list scenario and the Downtown Plan scenario shown in the table. Thus, emissions of HC and NO_x generated by the project and by cumulative development would not increase the Bay Area ozone concentrations which would otherwise occur.

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It is possible, however, that excess NO_x emissions could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, incremental NO_x emissions generated by the project and by cumulative development could lead to violations of the NO₂ standard with concomitant health effects; could reduce visibility; (or to a relatively small extent due to the small magnitude of the increase and to dilution over time and distance), could increase acid rain further downwind, outside the Bay Area.

A special monitoring program, called a "Hotspot" program, was conducted near the intersection of Washington and Battery Sts. during the winter of 1980-81, approximately four blocks northeast of the proposed project. The observed high eight-hour average carbon monoxide (CO) concentration was 10 ppm, which is 1 ppm more than the applicable air quality standard of 9 ppm./1/ The highest one-hour average concentration was 15 ppm, which is 5 ppm lower than the applicable state standard. In 1982, a street-level average CO maximum of 14.5 ppm was measured at the monitoring station at 939 Ellis St., near Van Ness Ave. These data indicate that some locations in San Francisco, particularly those near streets with high traffic volumes and congested traffic flows, may experience violations of CO standards under adverse meteorological conditions.

CO concentrations are predicted to be less in 1990 and subsequent years than shown for 1984. In 1990 traffic volumes in the downtown area would increase by about 8%, area-wide, over 1984 volumes. However, in 1990 the average vehicle is expected to emit 32% less CO than in 1984 due to ongoing state and federal emissions controls. The projected effects of state and federal emission controls on new vehicles (and the retirement of older, polluting vehicles) would more than offset the increases in traffic volumes and traffic congestion.

Curbside CO concentrations at selected intersections affected by project-generated traffic, and by cumulative development traffic (based on the March 10, 1984 cumulative list), were projected for worst-case conditions (poor dispersion meteorology), and are compared with the ambient standards in Table 11, p. 110a. These concentrations are also compared in the table

IV. Environmental Impact

to concentrations projected for C-3 District development by the Downtown Plan Draft EIR. No excesses of the applicable CO standards are projected at either location analyzed, under any scenario.

CO concentrations within the project's parking garage would be maintained within standards by a ventilation system controlled by CO monitors.

TABLE 11: PROJECTED WORST-CASE CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm) /a/			
		1984	Cumulative List 1990/b/	Downtown Plan/c/ 1990	2000
Battery & Washington	1-hour	13.0	10.1	9.5	8.3
	8-hour	8.9	6.7	6.5	5.8
Battery & Clay	1-hour	13.0	10.1	9.5	8.3
	8-hour	8.6	7.0	6.7	6.0

/a/ Calculations for all four scenarios were made for worst-case (poor dispersion) meteorology, using the modified linear rollback method. Background concentrations were calculated to be 7.3 ppm for one hour and 5.6 ppm for eight hours in 1984, 5.4 ppm for one hour and 4.1 ppm for eight hours in 1990, and 4.8 ppm for one hour and 3.7 ppm for eight hours in 2000. No excesses of ambient standards are projected. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standard is 9 ppm.

/b/ Based on list of projected Cumulative Office Development in Downtown San Francisco as of March 10, 1984, Table C-2, pp. A-32a - A-32d of this report.

/c/ Downtown Plan Draft EIR, Table IV.1.3, p. IV.1.16.

SOURCE: Environmental Science Associates, Inc.

Emissions of TSP generated by the project and by cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.

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Emissions of SO_x generated by the project and by cumulative development would probably not bring San Francisco's SO₂ concentrations significantly closer to violating the standard.

The project, and other downtown development on the cumulative list or under the Downtown Plan, would not directly conflict with the pollution reduction strategies recommended by the 1982 Bay Area Air Quality Plan. These strategies consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. In addition, emissions associated with the project and with other downtown development are not projected by this EIR or by the Downtown Plan Draft EIR to increase ozone concentrations or to result in violations of CO standards, and thus would not indirectly conflict with the objectives of the 1982 Bay Area Air Quality Plan.

Alternative 1 to the Downtown Plan (covered in the Downtown Plan Draft EIR) would generate about 38% more emissions in 2000 (from development between 1990 and 2000) than would the Downtown Plan. Alternative 4 would generate about 7% less emissions than would the Downtown Plan. Emissions generated by Alternatives 2, 3, and 5 would fall within this range. The types of air quality impacts under these alternatives would be the same as those under the Downtown Plan; their magnitudes would vary in proportion to their differences in emissions.

The pollutant emissions and CO concentrations shown in Tables 10 and 11 were projected for 1990 on the basis of two different sets of future growth assumptions, with differing results. In one case, a list of specific projects proposed, approved, and under construction was used (the list of Cumulative Office Development in Downtown San Francisco, March 10, 1984). In the other case, the employment growth trend approach of the Downtown Plan EIR was used, and those projections presented. In both cases, the method for the air quality analyses was identical. However, the results using projected cumulative development are not directly comparable with those from the Downtown Plan DEIR for several reasons:

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First, it is reasonable to assume that the projected cumulative development on the list would be completed and occupied sometime between 1990 and 2000, rather than in either of those two analysis years which were used in the Downtown Plan Draft EIR. The pollutant emissions and CO concentrations were calculated for 1990 using the cumulative list, even though those projects are not expected to be completed until the mid-1990s, in order to provide the possibility of some comparison with the Downtown Plan Draft EIR results. However, this has the effect of artificially increasing the cumulative list results, because average-vehicle emission rates will decline with time, as a result of federal and state controls.

Second, the transportation analysis used for the Downtown Plan Draft EIR differs from that used for the cumulative list, as described in the Transportation section of this EIR (pp. 90-109). Briefly, these differences include the fact that a cumulative list-based analysis assumes that the same proportion of new employees would commute by private auto as is currently the case. In contrast, the Downtown Plan Draft EIR analysis projects a shift of commuters from driving alone to carpool and transit, because commute routes such as the Bay Bridge are already at or near capacity and could not accommodate all of the vehicles that would be used if the proportion of persons driving alone to work remained constant.

Other reasons for the differences include the use in the cumulative list analysis of a constant regional distribution of trips, whereas the Downtown Plan Draft EIR forecasts a declining percentage of new employees residing in San Francisco, and the lack in the cumulative list approach of discounting factors to account for trips between individual projects within the Downtown (see the preceding Transportation section of this EIR).

Thus, total (regional) vehicle-miles-travelled and the resulting pollutant emissions projected using the cumulative list approach are considered artificially high. On a local intersection basis, traffic volumes and the resulting CO concentrations might or might not be higher with the cumulative list approach, depending on the particular location. This is because the cumulative list method does not distribute traffic on all the same streets in

the same proportions as does the Downtown Plan Draft EIR method. For the two intersections analyzed here, the projected traffic volumes and CO concentrations are higher with the cumulative list approach.

NOTE - Air Quality

/1/ Association of Bay Area Governments, 1982, AQMP Tech Memo 40, 'Results of the 1980/1981 Hotspot Monitoring Program for Carbon Monoxide,' Berkeley, California.

G. CONSTRUCTION NOISE

The noise environment of the project site is dominated by vehicular traffic, including trucks, automobiles, and emergency vehicles; this is typical of downtown San Francisco. Sidewalk noise measurements taken during the weekday p.m. peak commute hours show average noise levels of about 75 dBA Leq on Montgomery and Sacramento Sts./1,2/ Intermittant noises with intensities as high as 90-95 dBA were also measured during this period. The Environmental Protection Element of the Comprehensive Plan (1974) indicates an Ldn of 70 dBA along both Montgomery and Sacramento Sts./3/

Throughout the 20-month construction period, increased noise levels can be expected in the surrounding area. Construction equipment other than impact tools must comply with Section 2907(b) of the San Francisco Noise Ordinance which requires that sound levels not exceed 80 dBA at 100 ft. from the source. Section 2908 of the Noise Ordinance prohibits construction work at night from 8:00 p.m. to 7:00 a.m. if noise from such work would exceed the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works. Pile-driving would not be required for this project.

Table 12, p. 112, shows typical exterior noise levels associated with the different phases of construction. People inside nearby buildings would experience noise levels lower than those shown in Table 12. With windows open, interior noise levels at 50 ft. from the source would be about 10 to

TABLE 12: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET

<u>Construction Phase</u>	<u>Average Noise Level (dBA)</u>
Ground clearing	84
Excavation	89
Foundations	78
Erection	87
Finishing	89

SOURCE: D.N. May, Ph.D., 1978, Handbook of Noise Assessment, Van Nostrand Reinhold Environmental Engineering Series, p. 211.

15 dBA less than indicated. Closing windows would reduce noise levels by about 20 to 25 dBA below the tabulated figures.

The effects of human exposure to high noise levels have been widely studied./4/ Sounds exceeding 35 to 40 dBA can interfere with sleep. Sounds above 60 dBA interfere with normal speech. When sounds exceed 70 dBA, noise begins to interfere with concentration and work performance. Prolonged exposure to sounds between 90 and 100 dBA can cause hearing damage.

During the 18 weeks of excavation and foundation work and the 22 weeks of building erection and exterior finishing, noise levels could reach 87 dBA in the Philippine Bank of California at 455 Montgomery St., directly across Sacramento St. from the site. Noise levels could also reach 67 dBA in the Asian American Bank at 500 Montgomery St., across Montgomery St. from the site. Noise levels in Jack's and Paoli's restaurants, at 615 Sacramento St. and 520 Montgomery St., respectively, could reach 70 dBA, with closed windows and doors, and could interfere with normal speech. The two- to three-story retail/office and residential structures (some of which also rely on open windows for ventilation) fronting Sacramento or Commercial Sts. adjacent to and west of the site could also experience noise levels of at least 70 dBA. Daytime sleepers could be affected up to a one-block radius (including a residential hotel on the south side of Clay St. between Montgomery and

IV. Environmental Impact

Kearny Sts.); interior noise levels at the Chinatown Holiday Inn on Kearny St. would not interfere with sleeping.

Noise levels in the two- to three- story retail/office structures adjacent to and west of the site would allow intermittent communication, requiring raised voices at distances greater than two feet, and would restrict telephone use to a marginal level.

The Bank of Canton and the 456 Montgomery St. building are under construction near the project site. If construction of the three buildings were to overlap so that similar noise levels occurred at the same time, noise experienced by people in the project vicinity could be about 10 dBA higher (twice as loud) than the values given above.

The KABL radio station has offices and a recording studio north of the site at 632 Commercial St. KABL office space with openable windows fronts on Commercial St. Noise levels up to 75 dBA would occur in the offices during demolition and construction activities (with open windows). This noise level would be distracting and annoying, and would interfere with speech and telephone use in these offices. The recording studio at this location is used primarily for recording commercials, and for a live broadcast of a Sunday evening talk show. The recording process does not occur continuously; however, the station management desires that this capability be available on short notice. Because the recording studio is located in the northern end of the KABL building, project construction noise would not affect the use of the studio./5/

NOTES - Construction Noise

/1/ Existing noise levels at the project site are based on noise measurements by Environmental Science Associates on Tuesday, April 5, 1983.

/2/ dBA is the measurement of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound. Leq, the equivalent noise level, is the average energy content of the noise over a given time period.

/3/ Ldn, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises. Noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

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/4/ Central Institute for the Deaf, 1971, Effects of Noise on People, prepared for the U.S. Environmental Protection Agency.

/5/ Charles M. Salter Associates, Inc., Consultants in Acoustics, letter report, September 15, 1983.

H. ENERGY

Demolition of existing structures, excavation, and removal and transport of excavated material from the project site would require an unknown amount of energy. Project construction, including fabrication and transportation of building materials, would consume approximately 550 billion British thermal units (Btu) of energy at-source, or the equivalent of about 99,000 barrels of crude oil./1,2/

Pacific Gas & Electric Company (PG&E) would provide electricity and natural gas to the proposed project through its existing distribution system. Project mechanical systems designs are not complete; however, the project would include several energy-conservation features: multiple switching for lights, allowing illumination of one portion of an office in use; an outside-air/return-air economizer cycle, which would allow for the use of outside air to cool the building when outdoor temperatures are lower than indoor; a variable volume air conditioning system, which chills air to the coldest temperature needed to cool the warmest spot in the building and then adds only enough super-cooled air into each area as needed to cool that particular area; and carbon monoxide monitoring which would control garage ventilation./3/

The project would have an estimated annual energy consumption of about 122,400 Btu per sq. ft.,/3/ and would meet the performance standards of Title 24 of the California Administrative Code, which permit consumption of a maximum of 126,000 Btu per sq. ft. annually for office space./4/ Average daily energy demand would be about 335 Btu per sq. ft.

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Table 13, below, shows annual project energy consumption. Project operation would consume (at point-of-use) about 3.9 million kilowatt-hours (kWh) of electrical energy per year, primarily for ventilation and cooling./3/ Monthly electrical use would range from approximately 269,000 kWh in February to about 363,000 kWh in August. Average electrical consumption would be about 11 kWh per sq. ft. per year compared to an estimated average of about 17 kWh per sq. ft. per year for ten other recently proposed high-rise office structures./5/ Average monthly electricity consumption would reach 0.32 million kWh or about 0.94 kWh per sq. ft. per month. Figure 36, p. 116 illustrates peak daily and annual electrical consumption distributions. Peak electricity consumption would occur on August mornings, and would not coincide with PG&E's system-wide peak demand period on August afternoons. The project would consume (at point-of-use) about 2.0 million cubic feet of natural gas per year (or about 5.6 thousand cubic feet per day average) for space and water heating (see Table 13)./3/ Natural gas consumption would equal about six cubic feet per sq. ft. per year for the project as compared to an estimated average of 13 cubic feet per sq. ft. per year for ten other recently proposed high-rise office structures./5/ Figure 37, p. 116 shows peak daily and annual natural gas consumption distributions. Peak natural gas consumption would occur on January mornings, and would not coincide with PG&E's system-wide peak demand period on January evenings.

TABLE 13: PROJECTED ANNUAL PROJECT ENERGY CONSUMPTION

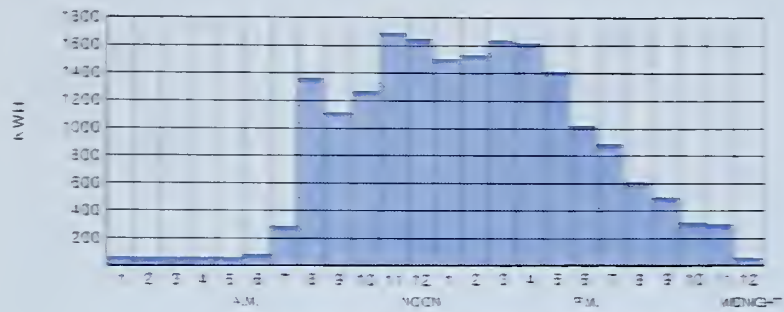
<u>Building Operation</u>	<u>Units of Energy</u>	<u>Btu at Source/a/</u>
Electricity	3.9 million kWh	40 billion
Natural Gas	2.0 million cu.ft.	2.3 billion
<u>Transportation/b/</u>		
Gasoline	121,000 gallons	17 billion

/a/ 1 kWh = 10,239 at-source Btu; 1 cu.ft. = 1,100 at-source Btu;

1 gallon = 140,000 at-source Btu.

/b/ For vehicle trips generated by the project.

SOURCE: Skidmore, Owings and Merrill; Environmental Science Associates, Inc.

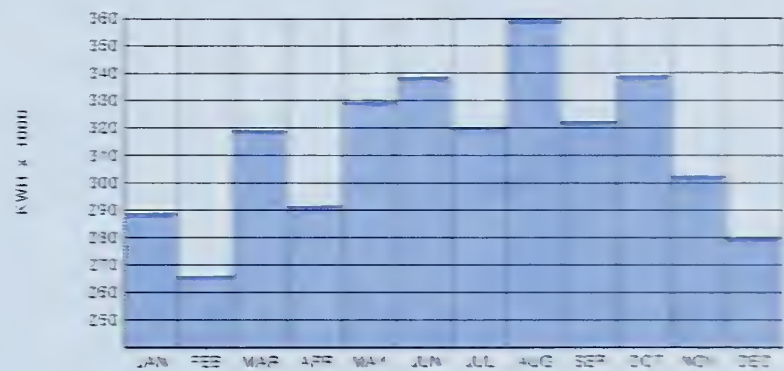


Peak Day Electrical Consumption (August)

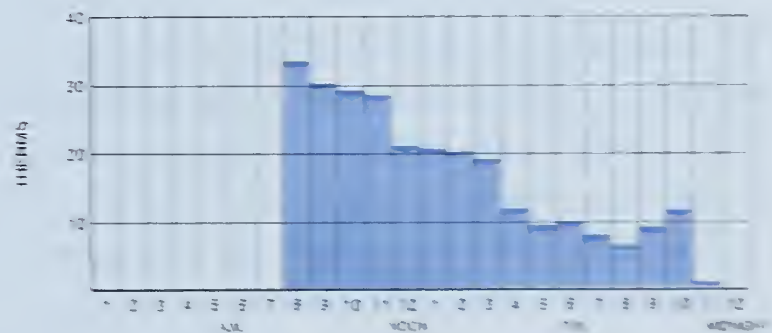
FIGURE 36

Projected Electrical
Demand Distribution

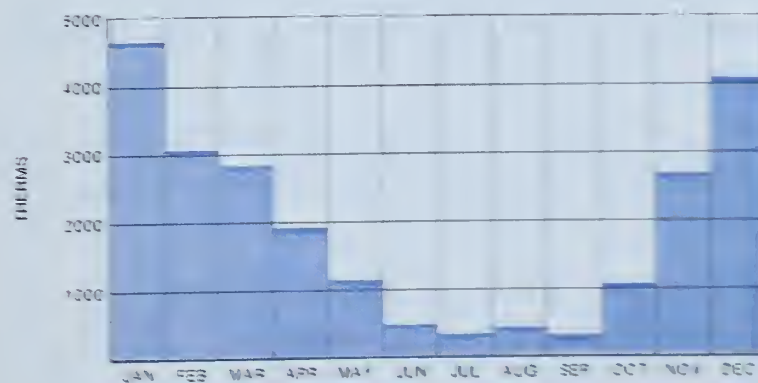
SOURCE:
Skidmore, Owings & Merrill



Average Monthly Electrical Consumption



Peak Day Natural Gas Consumption (January)



Average Monthly Natural Gas Consumption

FIGURE 37

Projected Natural Gas
Demand Distribution

SOURCE:
Skidmore, Owings & Merrill

Existing energy use by the buildings on the site is estimated to be about 1.4 million kWh of electricity per year, and about 12 million cubic feet of natural gas per year./6/ Of these, the existing buildings to be retained are estimated to use about 0.6 million kWh of electricity per year, and about 0.3 million cubic feet of natural gas per year. The project would thus increase electricity consumption over the whole site by about 3.1 million kWh per year, and decrease natural gas consumption by about 9.7 million cubic feet per year. (The decrease in natural gas consumption would be caused by the elimination of several restaurants, which use large amounts of natural gas in comparison to office and retail uses.)

Project-generated vehicle travel would consume approximately 121,000 gallons of gasoline annually, based upon the projected mix of vehicles expected to be in use in California in 1985. In general, statewide per-vehicle fuel use should decrease as the vehicle fleet becomes more efficient. Additional energy would be consumed by ferries, buses, trains, and light rail vehicles serving project employees. Transportation energy would be derived from renewable, primarily hydroelectricity, and non-renewable resources.

- The Department of City Planning predicts future power consumption, based on the electricity use of 18 recently constructed buildings in the downtown area, to be about 18 kWh per sq. ft. per year./7/ This number includes an estimate of the base power consumption of the building core, such as air circulation, cooling, mechanical and lighting loads, as well as power demands due to increased use of electronic office machines including copiers, computers and word processors, which are generally in operation the entire work day. Yearly estimated electrical consumption for the projected 19 million sq. ft. of additional office space at the time of buildout of the March 10, 1984, list of projected Cumulative Office Development in Downtown San Francisco would be approximately 340 million kWh of power per year. Previous electrical consumption estimates in EIRs did not include power used by office machinery.
- PG&E, in examining its ten year load growth projections for San Francisco, believes that growth rates of net new office space in the downtown area will diminish in the next decade from the historic figure of 1.5 million sq. ft. per year to between 1 million and 1.2 million sq. ft. per year./7a/ The

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utility company's current analysis of a typical office building yielded an annual kilowatt hour consumption of about 17 kWh per sq. ft. This agrees with the City's estimate (noted above), within the limits of estimation methodology. Using these figures, total increased energy demand for the next decade would be approximately 200 million kWh of electricity per year, or less than half of demand projected using the cumulative list. The lower PG&E prediction is largely due to its lower estimation of future development.

- Projections of energy use discussed in the Downtown Plan Draft EIR indicate an increase of about 210 million kWh of electricity per year between 1984 and 1990 as a result of all new development occurring in the C-3 District. From the period 1990 to 2000, electrical consumption rates would increase annually by 330 to 350 million kWh above present figures, or 120 million to 140 million kWh above the increases estimated for the 1984-1990 period. Both these estimates are for growth that would occur under the Downtown Plan scenario./7b/ Energy requirements for development that would occur with the Alternatives proposed in the Downtown Plan Draft EIR predict an increased demand of between 300 million kWh per year to 500 million kWh per year between 1984-2000./7c/
- Estimates referred to in the Downtown Plan Draft EIR are not directly comparable to those estimates made by applying a kWh/sq. ft./yr. generation factor to the square footage of projected cumulative development (List method) for two reasons. First, the energy projections made using the List method estimate energy demand at the time of full buildout (mid 1990's) rather than during the 1984-1990 and 1990-2000 time periods as in the Downtown Plan Draft EIR and, secondly, about 75% of the projects on the March 10, 1984, list of projected Cumulative Office Development in Downtown San Francisco fall within the C-3 District boundary, which means the list method estimates energy consumption for a larger area than the Downtown Plan Draft EIR.
- The PG&E projection cannot be compared to the projections in the Downtown Plan Draft EIR because they cover different time periods. A comparison of the Downtown Plan and PG&E estimates for electricity use in downtown San Francisco for the last decade of the century is currently being prepared by PG&E in a report to be released later this year.

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- Natural gas consumption for new office development would be less than current demand which include consumption in older, less energy-efficient buildings. The Department of City Planning estimates that natural gas use by new buildings in the year 2000 would be 11 cu. ft./sq. ft./yr./7/ The City Planning Department further estimates that between 1984 and 2000 gas consumption will grow by 470 million cu. ft. per year, of which about 210 million cu. ft. per year would be for office uses. PG&E is currently assessing projected demands for the San Francisco area in a report to be released later this year.

PG&E plans to meet increased San Francisco energy demands to the year 2000 are discussed on pp. IV.G.13-14 of the Downtown Plan Draft EIR, which are hereby incorporated by reference.

PG&E currently obtains its electric energy from oil, natural gas, nuclear, hydroelectric and geothermal sources. New demands for electricity in the PG&E service area of Northern California are anticipated to be met primarily from coal, nuclear and hydroelectric sources. Co-generation and additional geothermal power development are planned to supplement the existing supplies.

Among the major new power plants expected by PG&E are the Diablo Canyon nuclear plant and the Helms Pumped Storage hydroelectric plant. PG&E expects approval of low-power testing at the Diablo Canyon plant in the first quarter of 1984, and full-scale commercial operation in the second quarter of 1984./8/

PG&E does not currently operate any nuclear power plants. It purchases power from Sacramento Municipal Utility District's (SMUD) Rancho Seco nuclear generator and some nuclear-generated power may be purchased by the utility through its Pacific Northwest Intertie. PG&E anticipates increased purchases of electricity from other utilities, primarily hydroelectric and nuclear facilities in the Pacific Northwest, as available./9/ These surpluses are uncertain because of cancellation of two of the five Washington Public Power Supply System nuclear plants and long-term delays in two other plants because of financial problems. Increases in demand for power in the Pacific Northwest and fluctuation in available hydropower because of climatic variation could also affect supplies from the Pacific Northwest.

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The Helms Pumped Storage (hydroelectric) generator began testing in August, 1983. Units 1, 2 and 3 (375,000 kilowatts each) are expected to be in commercial operation in early 1984. The Helms project would add to reserve margins and would reduce the need for purchases of peak-period power supplies from outside sources./10/

PG&E would be able to supply full electrical service to the project without Diablo Canyon; however, projected costs would be higher and reserve margins would be lower than desired by the utility./8/ Extreme peak demands for electricity systemwide, if combined with forced generator outages, could deplete reserve margins, necessitating purchases of electricity from other utilities or resulting in short-term "brown-outs."

NOTES - Energy

/1/ Hannon, et al., 1978. "Energy and Labor in the Construction Sector", Science 202.

/2/ British thermal units (Btu) are units for measuring energy. One Btu is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level. The term "at-source" means that adjustments have been made in the calculation of the Btu energy equivalent to account for losses in energy which occur during generation and transmission of the various forms of energy, as specified in Energy Resources Conservation and Development Commission, 1977, Energy Conservation Design Manual for New Nonresidential Buildings, Sacramento, CA; and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978, Energy and Transportation, Sacramento, CA (Project 20-7, Task 8).

/3/ Skidmore, Owings & Merrill, Interoffice Memorandum, 505 Montgomery St. - EIR, April 12, 1983.

/4/ State energy efficiency standards are described in Energy Resources Conservation and Development Commission, February 1980, Conservation Division Regulations Establishing Energy Conservation Standards for New Residential Buildings and New Nonresidential Buildings, California Administrative Code, Title 24, Part 6.

/5/ Energy consumption values as reported in environmental analyses for projects listed in Appendix G, p. A-56.

/6/ Existing energy consumption estimated using factors in Citizens Energy Policy Advisory Committee, April 1982, Report on Recommendations for Reducing Community Energy Costs in the City and County of San Francisco.

- /7/ Unpublished building energy consumption data supplied by David Rubin, Department of City Planning, personal communication, January 1984.
- /7a/ Ken Austin, Commercial-Industrial Marketing Supervisor, Pacific Gas and Electric Company, letter, March 23, 1984. Available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

● /7b/ Downtown Plan DEIR, pp. IV.G.1 - IV.G.17.

● /7c/ Downtown Plan DEIR, pp. VII.G.1 - VII.G.4.

/8/ George Sarkisian, Public Relations Department, Pacific Gas and Electric Company, telephone conversation, October 28, 1983.

/9/ Jim Davidson, Senior Civil Engineer, Pacific Gas and Electric Company, telephone conversation, May 21, 1982.

/10/ Ron Rikowski, Public Relations Department, Pacific Gas and Electric Company, telephone conversation, October 28, 1983.

I. EMPLOYMENT, HOUSING AND FISCAL FACTORS

EMPLOYMENT

Direct Project-Related Employment

After completion, the project would accommodate a total of about 1,480 permanent full-time jobs (new-construction floor area plus existing retained floor area). The net new jobs at the project site would be about 1,220 (new-construction floor area minus the demolished floor area). (See Table 14, p. 121.) Although no tenants have been secured, prospective tenants are anticipated to consist mainly of corporate and professional businesses. Since specific tenants are unknown, the projected total number of employees was derived on the assumption of an average number of sq. ft. per employee, by employment type. About 100 office employees and 40 retail employees would be displaced by the project (assuming full occupancy of existing buildings; some space is currently vacant - see Table 2, p. 42). The tenants in the retained buildings would not be displaced.

Indirect (Secondary) Employment

Secondary employment and income would result from permanent project employment, through the multiplier effect. Each employee on the site would

TABLE 14: PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE/a/

<u>Employment Type</u>	<u>Building Space (Gross Sq. Ft.)</u>	<u>Space per Employee (Sq. Ft.)</u>	<u>Projected Number of Employees</u>
Office			
New	327,250	250/b/	1,310
Retained	27,040		110
TOTAL	354,290		1,420
Retail			
New	9,900	350/b/	30
Retained	2,200		10
TOTAL	12,100		30 /f/
Building Staff	366,390	12,000/b/	30
TOTAL EMPLOYMENT/c/			1,480 /f/
EXISTING ON-SITE EMPLOYEES/d/			(260)
NET NEW EMPLOYEES/e/			1,220

/a/ Rounded to the nearest ten employees.

/b/ Based on one worker per 250 sq. ft. of office space, one worker per 350 sq. ft. of commercial/retail space and one janitorial service worker per 12,000 sq. ft., (California Office of Planning and Research, Economic Practices Manual, January, 1978).

/c/ Based on new-construction floor area plus existing retained floor area.

/d/ Based on total existing floor area.

/e/ Based on new-construction floor area minus existing demolished floor area.

/f/ Total does not reflect the sum of the rounded numbers; sum of actual figures used for total employment.

SOURCE: Environmental Science Associates, Inc.

generate additional employment through expenditures for goods and services. On the assumption that the new and retained jobs accommodated by the project would be primarily in the finance, insurance, and real estate (FIRE) sector, about 1,440 additional jobs in other sectors of the Bay Area economy would result from the project./1/ Thus, the total number of Bay Area jobs that would be supported by growth in downtown employment due to the project would be about 2,660 (1,220 project jobs plus 1,440 jobs from the multiplier effect)./1/

Project construction would require about 200 person-years of labor, about 125 construction jobs over a 19-month construction period. About 310 additional person years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction./1/

HOUSING

Project-Related Effects

As indicated in the previous subsection, the project would result in a net increase in on-site employment of about 1,200 full-time jobs. To the extent that the project would attract out-of-area employees and also contribute to the formation of additional households by existing area residents, it would contribute to increased housing demand.

On the basis of the assumptions described in the 101 Montgomery Street Final EIR, between 15% and 30% of net new employees would be expected to move to San Francisco and each household would be occupied by 1.4 workers./2/ The project could thus result in about 130 to 260 new households in San Francisco. The housing formula contained in the Office Housing Production Program Interim Guidelines assumes 40% of downtown office workers would live in San Francisco and each household would be occupied by 1.8 workers; thus the project would generate a demand for about 270 dwelling units in San Francisco. The number of new households to be generated outside San Francisco as a direct result of the project is projected to be about 170 on the Peninsula, about 280 in the East Bay, and about 110 in the North Bay (see Appendix C, Table C-3, p. A-33). These projected housing effects would be less if the newly created jobs were filled by unemployed Bay Area residents. In December 1982, the unemployment rate in San Francisco was 8.8%./3/ New household formation in the Bay Area results not only from economic development, but also from children reaching maturity, immigration and other demographic factors independent of office development in San Francisco./4/

The project sponsor proposes to mitigate the project-generated demand for 270 units in San Francisco through either direct sponsorship of a housing development or financial aid to a housing development, as provided for in the City's Office Housing Production Program.

Housing Affordability

A discussion of the parameters affecting an analysis of housing affordability for new office workers is contained in the 123 Mission Street Final EIR, hereby incorporated into this EIR by reference pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15149./5/ Briefly, a survey of occupants of a building comparable to the project would yield some housing affordability data, but not all the data necessary for a complete analysis./6/ Not all of the new employees attributable to the project would be located on the project site; some of the new jobs would be created in existing buildings vacated by workers or firms moving to the project./2/ Even if the number of new employees and their preferences for housing were known, a household's ability to pay for housing depends on a variety of factors in addition to individual income, such as family composition and housing preferences./6/

In the absence of an employee-specific survey, a limited analysis of housing affordability, based on available data, appears in Appendix C, Table C-4, p. A-34. Data in the Table are based upon published sources of office worker incomes (not household income), and published sources of housing prices (not necessarily existing vacant units). Assumptions are made regarding the ratio of housing expenses to income, mortgage interest rates, and down payments. Analysis based on these data and assumptions indicates that most project employees would not be able to afford ownership of housing in San Francisco, although some employees, depending on the number of workers per household, would be able to do so. Most project employees, except the lowest-paid clerical employees living alone, would be able to afford rental housing in San Francisco. These conclusions are conditioned by the assumptions listed above.

FISCAL

Revenues

The proposed project, after occupancy in 1986, would generate about \$1.18 million in total property, payroll, sales, gross receipts and utility tax revenues to the City's General Fund, a net increase of about \$1.03 million over revenues generated to the General Fund from the existing site uses. General fund revenues with the project would result from the new building and the retained buildings. The net increase is derived by subtracting revenues generated by all existing on-site uses from project-generated revenues. (See Tables 15 and 16, pp. 124 and 125.)

Assessed Valuation and Property Taxes

Based on replacement costs, the fair market value of the project would be about \$72 million (in 1983 dollars).⁷⁷ On the basis of the property's full assessed (or market) value, the project would generate a total of about \$842,000 annually in total property tax revenues (from the \$1.17 per hundred dollars of assessed value). Projected annual property tax revenue of about \$629,400 would accrue to the City's General Fund, a net increase of about \$593,800 over existing (\$35,600) 1982-83 property tax revenues to the City.

The building would also generate property tax revenues to be used to retire bond debts. The tax rate at which these revenues would be generated in 1986 would depend on the amount of principal and interest payments due in that year and the total assessed value of property in San Francisco. The rate in 1982-83 is \$0.17 per hundred dollars of assessed value. If that were still the rate in 1986, when the building would be occupied, bond payment revenues from the building would be about \$122,000, a net increase of about \$115,000 above existing 1982-83 bond retirement revenues of about \$7,000. The complete distribution of bond and non-bond property tax revenues that would be generated by the proposed project is shown in Table 15, p. 124.

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TABLE 15: DISTRIBUTION OF PROPERTY TAX REVENUES FROM THE PROJECT SITE IN 1986
(1983 DOLLARS)

<u>Agency</u>	<u>Tax Rate/a/</u>	<u>Ad Valorem Percent/b/</u>	<u>Revenues/b/</u>
City and County of San Francisco			
General Fund	0.874	74.7%	\$629,400
Open Space Acquisition	0.025	2.1	18,000
Bond Repayment	0.099	8.4	71,100
S.F. Community College District	0.014	1.2	10,400
S.F. Unified School District			
General Purpose	0.078	6.7	56,100
Debt Service	0.008	0.7	6,000
Bay Area Air Quality Management District	0.002	0.2	1,500
BART			
General Fund	0.006	0.5	4,600
Debt Service	<u>0.063</u>	<u>5.4</u>	<u>45,200</u>
TOTAL	\$1.17	100.0%	\$842,400/a/

/a/Rounded.

/b/Based on the 1982-83 composite tax rate of \$1.17 per \$100 of assessed valuation and an assessed valuation of \$72 million. Rounded to nearest \$100.

SOURCE: San Francisco Controller's Office; calculations by
Environmental Science Associates, Inc.

TABLE 16: PROJECTED NET TAX REVENUES GENERATED DIRECTLY INTO THE GENERAL FUND BY THE PROPOSED PROJECT

Tax Category	Tax Rates (1982-83)	Revenues/a/		
		Existing Site	Proposed Project	Net Increase (Decrease)
Property Tax	74.7% of \$1.17/\$100 fair market value	\$35,600	\$629,400	\$593,800
Payroll Tax	1.5% of gross payroll expenditures	71,900	435,900	364,000
Gross Receipts Tax	0.3% of total rental income	2,600	38,400	35,800
Sales Tax	1.25% of gross retail receipts	28,600	38,100	9,500
Utility Tax	0.5% of gross expenditures	10,000	39,600	29,600
	TOTALS	\$148,700	\$1,181,400	\$1,032,700

/a/ Rounded to nearest \$100.

See Notes /7/-/13/, p. 131e-132, for sources and assumptions used to derive payroll, gross receipts, sales and utility tax revenues.

SOURCE: Environmental Science Associates, Inc.

Payroll and Gross Receipts Taxes

Tenants of the proposed building would pay either the payroll or gross receipts tax, whichever is greater./8/ Payroll tax revenues from the project would be about \$436,000 per year, on the assumption of the following:

1) payment of a payroll tax by all tenants; 2) a 1982 average wage of about \$25,000 for downtown office workers/9/ and \$13,200 for retail and maintenance workers/10/; and 3) the current approved payroll tax rate of 1.5%. The Payroll Tax Ordinance exempts about 10% to 20% of the employees from the tax because banks, insurance companies, and owners of businesses with tax liabilities of less than \$2,000 do not pay business taxes under the ordinance. The owners of the project would pay a 0.3% gross receipts tax on their rental income. The projected total annual rental income for the project would be about \$12.8 million (1983 dollars), based on the assumption of \$35

IV. Environmental Impact

per sq. ft. per year rent for office space. Gross receipts tax revenues therefore would be about \$38,500. Total payroll and gross receipts tax revenues would be a net increase of about \$473,000 above the local business taxes (about \$72,000) generated by the existing uses on the project site.

The 1.5% payroll tax and 0.3% gross receipts tax are the rates approved by Board of Supervisors' Ordinances 118-80 and 119-80. These rates could be increased in the future if the Board of Supervisors were to enact new ordinances./11/

Sales Tax

Sales tax revenues would be generated by employee expenditures and the project's retail space. It is assumed that gross receipts of the retail space would be about \$120 per sq. ft. Based on a rate of 1.25% of gross retail sales, projected annual sales tax revenues accruing to the City from taxable expenditures by project employees for retail goods and by on-site retail sales would be about \$38,000, compared to about \$28,600 at present, an increase of about \$9,000./12/

Utility Taxes

General Fund revenues are generated to the City by utility taxes on water, gas, electricity and telephone (telephone costs are generally the largest contributors). The existing site utility use generates about \$10,000 annually in utility tax revenue to the City. Projections of utility use indicate that the project would generate about \$40,000 annually from utility taxes, an increase of \$30,000./13/

Total Revenues

General Fund revenues for the City and County of San Francisco from the project would total about \$1.18 million, based on the tax rates and fees in effect in fiscal year 1982-83. General Fund revenues from the existing uses on the site totaled about \$154,000 in 1982; the project would result in about a \$1.03 million net increase in General Fund revenues (see Table 16, p. 125).

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Projected total and net revenues accruing to the General Fund from the project site are based on 1982-83 tax rates and business conditions. Total revenues could change if property tax distribution to the City and County were to change in future years; if payroll taxes were to change, as a result of change in employee's salaries; if office and retail rents were to fluctuate, affecting gross receipts tax revenue; and if costs for utilities were to change, particularly telephone costs, which are the largest contributors to the total utility users' tax.

Costs

Muni

The estimated 1980-81 (most recent Muni estimate) net marginal cost (or increase in the deficit for Muni operations) per additional ride is \$0.39./14/ The project would generate about 401,700 rides per year, which could generate a cost deficit to Muni of about \$157,000./14/ The project would partially pay for this deficit through its contributions to the General Fund. In the 1982-83 budget, about 10% of General Fund revenues were allocated to Muni. On the basis of the total General Fund revenues that would be generated by the project, the contribution to Muni would be about \$118,000 (1983 dollars) after project occupancy. On the basis of the marginal cost figures provided by Muni, the project would result in a net annual deficit to Muni of about \$39,000. This deficit could be greater because the Muni deficit-per-passenger-trip figure is based on 1980-81 data, the marginal cost is based on all rides and not peak-period rides, and the total project-related deficit is calculated for only those riders who would use Muni as their primary mode of transportation, excluding riders who would use a combination of transportation modes, such as Muni and Southern Pacific.

Effective April 1, 1982, the Muni fare per ride was increased from \$0.50 to \$0.60. The increase was made primarily to meet the fare-box revenue requirements of Assembly Bill (AB) 1107. AB 1107 allows Muni to receive a portion of the one-half cent BART sales tax revenue for operating expenses, provided that at least one-third of Muni's annual operating cost is paid from fare-box revenues.

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On April 27, 1981, the San Francisco Board of Supervisors approved Ordinance 224-81 to assess new downtown commercial development to support Muni. The plan called for a one-time fee of up to \$5.00 per gross sq. ft. upon construction of new downtown office space. The ordinance, currently in litigation, would contribute funds for operating costs and capital improvements for Muni transit services. If the one-time fee is upheld, the project could generate up to about \$1.5 million in one-time fee revenues to Muni. About \$1.5 million has been collected to date from other projects. About \$34 to 40 million could be collected in the next five to six years. There are no specific plans at this time for use of the fee revenues./15/

Muni has received a federal grant including \$31 million in federal monies and \$8 million in state monies; these funds are being used to purchase new equipment, including 110 standard diesel buses and a number of articulated buses. Muni also intends to purchase 57 articulated buses (31 diesels and 26 electric trolleys) with \$21 million it will receive from the General Fund as authorized by the passage of Proposition B in November 1982. These revenues are for capital costs as opposed to the one-time transit impact fee, which would be used for both operating and capital expenses.

- The San Francisco Municipal Railway Short-Range Transit Plan, 1983-88, was published by the Public Utilities Commission on July 15, 1983. This plan outlines capital improvements that will be necessary to meet increased demand for Muni services, and associated projections of operating costs and revenues.
- Proposed capital improvements for fiscal years 1984-88 indicate that in the first year of the Plan, capital expenditures would be about \$90 million. According to the Plan, Tables 60 and 61, these improvements "can be reasonably achieved" because "up to \$102 million could be available under optimistic funding scenarios. In the worst case, only a little over \$55 million would be available", which would require deferral of some capital projects. "A shortfall would not significantly affect the scheduled implementation of the highest priority rehabilitation and replacement projects required for the effective delivery of existing and committed transit services."

- Revenue projections for future years (beyond fiscal year 1983-84) are sensitive to funding decisions made by the state and federal governments. Projections in the Plan for these future years indicate funding levels for proposed capital improvements.

BART

BART budget projections for the 1983-84 fiscal year estimate a net operating deficit per passenger of about \$1.30./16/ With about 334,400 rides per year, the estimated annual BART deficit attributable to the project would be about \$434,700./17/ The project would generate about \$61,200 in revenue to BART, including about \$49,800 in property tax revenue, and about \$11,400 from the 75% allocated to BART of the 0.5% transit sales tax. (The remaining 25% of the 0.5% transit sales tax revenue is distributed among BART, Muni and AC Transit by MTC.) After subtraction of BART's revenues from sales and property taxes that would be generated by the project, the net operating deficit of BART due to the project would be about \$373,500.

For Fiscal Year (FY) 1981-82, BART attained a net operating surplus of \$7.6 million (after applying \$67.3 million in financial assistance) from property taxes, the 0.5% transit sales tax and state aid. In 1981-82, BART used \$2.6 million of this surplus to purchase capital equipment. The "BART 1982-87 Five-Year Plan" (adopted June 24, 1982) projects an overall operating surplus (after property tax, sales tax and other governmental assistance) of \$60.4 million from FY 1982-83 to FY 1986-87. These funds, together with federal revenues earmarked for transit from the recently approved \$0.05-per-gallon gasoline tax increase, could be applied to capital improvements by BART to meet cumulative transit needs of the region.

Costs and Net Revenues

Costs to San Francisco for providing municipal services (for example, fire, police, and general government) to the proposed project are difficult to estimate. Several studies on new office development indicate that overall costs per unit of service provided (per sq. ft. or per employee) to the new building would be lower than for existing buildings (Appendix C, Table C-5, p. A-37, identifies these fiscal impact studies and briefly discusses their findings). This reduction in per-sq.-ft. costs would be due primarily to

improvements in fire and security protection systems in new construction. Costs for water and sewer service would be paid through user charges.

In general, existing public facilities, equipment, and labor are adequate to serve the project. While total costs for serving the site would increase because of the larger floor space and employment, costs per unit of service would not increase, and might actually decline.

CUMULATIVE AND INDIRECT EFFECTS

● Downtown Office Space

The proposed project, together with other major downtown office buildings under formal review (8.7 million net new sq. ft.), approved (4.8 million net new sq. ft.), and under construction (5.1 million net new sq. ft.) would add about 19.0 million gross sq. ft. of net new office space if all were to be built (see Appendix C-2, p. A-32a to A-32d). The proposed project would represent 1.6 percent of the total net new office space on the March 10, 1984 cumulative list. This list subtracts existing office space, on the sites of new buildings, that would be demolished. Of the 19.0 million sq. ft. of office space on the cumulative list, about 12.8 million is within the C-3 District.

Projections for alternatives in the Downtown Plan Draft EIR for the C-3 District indicate 70.5 million gross sq. ft. of office space in 1990 and between 77.5 and 86.5 million gross sq. ft. of office space in 2000, an increase of 14.4 to 24.4 million sq. ft. The Downtown Plan would result in an increase of 16.8 million sq. ft./18/ The proposed project represents about two percent of the total increase in office space in the C-3 District over this period. These projections considered land availability, location preferences, market conditions, and economic trends as independent variables, plus various zoning and planning policies of the Downtown Plan and the five alternatives analyzed in the Downtown Plan DEIR. The forecasts in the Downtown Plan DEIR are of space expected to be built and occupied in the C-3 District between 1984 and 2000.

The amounts of office space on the cumulative list and in these forecasts, although distinct from each other, can be compared. The list contains about 12.8 million sq. ft. of office space in the C-3 District and the Downtown Plan DEIR indicates about 8.4 million sq. ft. of office space being added to the C-3 District between 1984 and 1990. The 12.8 million sq. ft. on the list would be expected to be absorbed in the mid 1990s.

Office space projections for all alternatives in the Downtown Plan DEIR for the year 2000 would exceed existing office space plus office space on the cumulative list, as the cumulative list cannot take into account projects not yet proposed. Office space on the cumulative list would be absorbed in the mid 1990s under all Downtown Plan DEIR alternatives. These comparisons are based on the assumption that all projects on the cumulative list would be built as proposed and projects not yet proposed (i.e., not on the cumulative list) would not be built before the years identified above. In addition, these comparisons are based only on projects on the cumulative list within the C-3 District.

● Residence Patterns and Housing

This section takes a long term perspective, focusing on changes in downtown workers living in San Francisco and the housing market implications of downtown growth.

Future Residence Patterns

Employment growth and building development in downtown San Francisco will result in more employees working and living in the City. Over time, more existing residents will take San Francisco jobs and others who take San Francisco jobs will move into the City.

Downtown Plan Forecast As Cumulative Context. Forecasts of residence patterns in the year 2000 were prepared for the Downtown Plan DEIR./19/ The scenario of C-3 District building development and employment growth under the Downtown Plan, as described in the Downtown Plan DEIR, incorporates the effects of policies affecting the size, cost and location of new development, as well as

underlying economic conditions influencing the demand for space. The forecasts of residence patterns for this growth scenario incorporate future housing, labor force, and employment patterns in San Francisco and throughout the region and consider changing demographic, housing market, and transportation factors.

According to the Downtown Plan forecasts, approximately 189,000 C-3 District workers would be living in San Francisco in 2000. This represents an increase of 30,000 residents employed in the C-3 District over the 159,000 estimated for 1984, a 19% increase./20/ Relatively more employed San Franciscans would be employed in the C-3 District. The percentage (employed San Franciscans holding C-3 District jobs) would increase from 45.0% in 1984 to 47.5% in 2000. Relatively fewer C-3 District jobs would be held by San Franciscans. The percentage (C-3 District jobs held by San Franciscans) would decline from 55.5% in 1984 to 50.2% in 2000. These changes would be the result of cumulative development and employment growth in the C-3 District between 1984 and 2000.

It is important to understand the difference between the two percentages above. In each case, the same estimate of the number of jobs held by San Francisco residents is compared to an estimate for a larger group: to all employed residents of the City in the first instance and to all C-3 District employment in the second. The percentages are different since the number of employed residents is different from the number of jobs. These percentages both describe the same employment situation, but from different perspectives.

The Downtown Plan forecasts fall within the range of estimates of C-3 District workers living in San Francisco that was identified by the analysis of Alternatives in the Downtown Plan DEIR. By 2000, the Alternative forecasts range from 189,000 to 193,000 C-3 District workers living in San Francisco. The relative comparisons described above apply to all the Alternatives; the percentage of total employed San Franciscans working in C-3 District jobs in 2000 would be higher than in 1984, while the percentage of C-3 District jobs held by residents would be lower.

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The residence patterns of future occupants of the 505 Montgomery project can be estimated using information developed in the Downtown Plan analysis. This approach assumes that employment densities for the building and residence patterns for those working in the building would reflect the average conditions for all similar buildings and occupants in the C-3 District in 2000. According to this approach there would be about 480 people employed in the project who would live in San Francisco. The project would account for about 0.3 percent of all San Franciscans employed in the C-3 District in 2000 under the Downtown Plan forecast./21/

Estimates Based On The List Of Office Projects In Downtown San Francisco. An alternative means of evaluating the cumulative effects of projects such as the proposed 505 Montgomery project is to use the list of all projects that are under construction, approved, or under formal review. (This list is discussed in Appendix C, pp. A-32a to A-32d. This list includes projects throughout the greater downtown, which includes the C-3 District, as well as adjacent areas.) It is possible to calculate from the list the change in the number of downtown workers living in San Francisco associated with this amount of development. Adding this number to the 1984 base estimate of downtown workers residing in San Francisco produces an estimate of total downtown workers living in the City, once all projects on the list were built and occupied. The results from this approach indicate that about 230,000 workers in the greater downtown area would live in San Francisco at that time./22/

This approach uses data from the 1983 Transportation Guidelines to estimate the residence patterns of future employees in the buildings on the list. Unlike the Downtown Plan forecast approach, this approach incorporates no changes over time in either employment densities or residence patterns. It assumes that current average conditions (reflected in the Transportation Guidelines) would continue throughout the build-out period for the list.

The project would account for about 0.2% of all downtown workers living in San Francisco when all projects on the list were built and occupied. The project would represent a smaller share of future activity in the greater downtown area than of activity in the C-3 District alone.

Differences In Cumulative Approaches. There are several important differences between the two approaches to cumulative analysis: the Downtown Plan approach of forecasting space and employment and the approach of using a list of proposed projects. The first approach incorporates forecasts of new development for all land uses (office, retail, hotel, and housing) and accounts for the demolition and conversion of existing space. The second approach accounts for the net addition of office and retail development. Moreover, the Downtown Plan forecast methodology incorporates changes in economic activity and employment that would occur in the use of existing space, while the list includes the changes accommodated by net new construction and some conversions./23/ The Downtown Plan forecast also includes employment growth, such as building maintenance and construction employment, that is not directly related to the occupancy of space. The Downtown Plan forecast incorporates changes over time in residence patterns, reflecting changes in the regional distribution of population, housing, and employment. The list approach applies relationships derived from current conditions to the future situation, assuming no changes over time. The Downtown Plan approach is currently limited to the C-3 District, while the list covers a larger geographic area. In addition, there is no definite timeframe associated with the list, while the Downtown Plan forecast represents a best estimate of the development likely to be built and occupied from 1984 to 2000. It is because of these differences that the cumulative estimates of future residence patterns under each approach are not comparable. Within each approach, however, the project can be compared to the cumulative totals as described above.

Housing Market Implications/24/

With continued employment growth, there would be more people with preferences for San Francisco housing and with greater financial resources to pay for housing. This additional demand for housing would be added to an otherwise large group of consumers with preferences for City housing.

The supply of housing is expected to be expanded in San Francisco. However, the private market is currently unable to directly produce an adequate supply of affordable housing. This situation arises from a number of national, regional, and local factors and is expected to continue.

There would be greater competition for available housing units with employment growth than without it. As a result of increased competition, housing prices and rents would be higher with continued employment growth than without it. How much higher depends on the future of other factors (such as interest rates and the availability of financing) and cannot be easily quantified.

Generally, continued employment growth at the levels reflected by the Downtown Plan Draft EIR forecast and the cumulative list could contribute to a future situation where housing prices and rents are moderately higher, on average, than current levels. At a minimum, employment growth is likely to be among the factors which keep prices and rents at their current levels, in constant dollars.

A more competitive City housing market with higher prices/rents would affect the type and quality of housing that can be purchased or rented for various prices and rents, the share of financial resources devoted to housing, and the extent to which housing needs and preferences are met. Over the long term, it could also affect the mix of types of residents in the City.

Different households would be affected in different ways. There would be people who decide not to move into the City and existing residents who would eventually move out of the City for more acceptable housing elsewhere. There would be many individuals who continue to live in San Francisco and pay higher prices/rents for City housing. Still others, who are unable or unwilling to pay more, would accept housing which does not meet their preferences or needs. And finally, there would be owners of existing units who would benefit to the extent that their housing appreciates.

Generally, those households with fewer financial resources available to pay for housing would make the most sacrifices in adapting to more competitive market conditions. They would have less ability to compete for housing and fewer options available to them. San Francisco currently has and will continue to attract a large number of persons who would be faced with these difficulties in securing housing.

The proposed project, as part of the future pattern of downtown office development, would contribute to these housing market impacts. The project's individual contribution cannot be separately identified.

Regional Perspective on Residence Patterns and Housing

The residence patterns of San Francisco workers can also be considered from a regional perspective. Future labor force, housing, and employment throughout the region were important factors in the Downtown Plan residence patterns forecasts. Expected trends in labor force participation, workers per household, housing production, and employment growth provided the future regional context in which the Downtown Plan forecasts were prepared.

Table 16A, p. 131c, presents residence pattern forecasts for C-3 District workers as prepared for the Downtown Plan Draft EIR and all alternative residence pattern forecasts for downtown workers using the March 10, 1984 list of downtown projects./25/ Both residence pattern forecasts are also shown as percentages of the total employed population in each part of the region, as forecast by the Association of Bay Area Governments (ABAG)./26/

The Downtown Plan 1984 estimates and forecasts for the year 2000 (first three columns on the left) indicate that the largest number of C-3 District workers would live in San Francisco, followed by the East Bay, the Peninsula, and the North Bay. The largest increase of C-3 District workers would be for those living in the East Bay, followed by San Francisco, the Peninsula and the North Bay. The next three columns compare the Downtown Plan residence pattern forecasts for C-3 District workers to ABAG's forecasts of total employed residents throughout the region. C-3 District workers would represent a relatively large share of all employed San Franciscans and relatively smaller proportions of the labor force in other Bay Area counties. Comparing 1984 and 2000, there would not be major changes in the C-3 District percentages of the labor force in each area. The same conclusions would apply in the case of any of the five Alternatives to the Downtown Plan.

The residence pattern forecast using the list of downtown projects leads to similar conclusions. In this case, the residence patterns for downtown

● TABLE 16A: REGIONAL PERSPECTIVE ON RESIDENCE PATTERNS

	Downtown Plan Forecast of Residence Patterns of C-3 District Workers /a/					List-Based Forecast of Residence Patterns of Workers in Greater Downtown Area /b/				
	Number of Workers		Percent of Total Employed Population in Each Part of Region /c/			Number of Workers		Percent of Total Employed Population in Each Part of Region /c/		
			Total 1984	Change 1984-2000	Total 1984			Total 1984	Change from 1984 /e/	Total Future
	Total 1984	Total 2000	Total 1984	Change 1984-2000	Total 2000	Total 1984 /d/	Total Future	Total 1984	Change from 1984 /e/	Total Future
San Francisco	159,000	189,000	45%	30,000	47%	198,000	230,000	57%	32,000	57%
East Bay	73,000	110,000	7	37,000	8	94,000	114,000	9	20,000	8
Peninsula	35,000	48,000	4	13,000	4	46,000	54,000	5	8,000	4
North Bay	19,000	29,000	7	10,000	7	27,000	33,000	10	6,000	9
TOTAL	286,000	376,000 /g/	11%	90,000	11%	365,000	431,000	14%	66,000	12%

/a/ Includes permanent employment and annual average construction employment. Incorporates changes in employment for office, retail, hotel and other uses.

/b/ There is no time frame associated with development of the projects on the list. This amount of space would probably be absorbed between 1990 and 2000. If all the projects on the list were built before the year 2000, there would be more development (not currently on the list) and thus more workers in the downtown area by that year. In this case, the percent of the regional employed population in 2000 would be higher than shown here.

/c/ Forecasts of employed residents in Bay Area counties from ABAG, Projections '83. ABAG presents forecasts of employed residents for 1985 and 2000. For comparability with the cumulative analyses (which use 1984 as the base year), ABAG's 1980 to 1985 projections were prorated over the five-year period to estimate 1984 conditions for the region.

/d/ The estimate of total employment in the greater downtown area includes 1984 C-3 District estimates from the Downtown Plan DEIR and order-of-magnitude estimates for the other downtown areas in that year, plus estimates of employment growth from the development of buildings on the list. See note /e/.

/e/ This estimate is based on all projects on the list except those included in the Downtown Plan DEIR 1984 base year estimate. The estimates of employment and residence patterns for projects on the list are based on data in the Transportation Guidelines, September, 1983.

/f/ The ABAG forecasts of employed population in each area of the region in 2000 are used for this calculation. As mentioned in note /b/, the projects on the list are likely to be built and occupied between 1990 and 2000. Therefore, by the year 2000, more projects (and thus more workers) could be expected and the percentages of the total regional employed population would be larger.

/g/ The Downtown Plan forecasts include some workers who would live outside the Bay Area. This is a small number and is not shown here.

SOURCE: Recht Hausrath & Associates

workers do not consider changes over time in regional labor force, housing, and employment./27/ The downtown workers estimated using this approach also represent a large share of both the totals and the growth of employed residents in San Francisco and relatively smaller shares of both the total and growth of employed residents elsewhere in the region. As in the case of the Downtown Plan forecast in 2000, there would not be major changes from the 1984 percentages showing downtown workers relative to the rest of the region's labor force.

Because regional housing supply assumptions are one basis for the forecasts, the above observation that the changes over time in the C-3 District or downtown worker percentages of the region's labor force in each area would not be large indicates that C-3 District / downtown workers would not require much larger shares of the region's housing in the future than they do now. In the future, the relationship between C-3 District / downtown workers and other workers competing for housing in the region would be relatively similar to the conditions in 1984.

In terms of the region's housing market, downtown development and employment growth would not, by themselves, have a major effect on the housing markets in other Bay Area counties or in the region overall. As a part of total regional employment growth to the year 2000, however, increases in San Francisco employment can be viewed as contributing to regional housing demand. A strong regional economy has been and will continue to be a factor supporting a competitive regional housing market with relatively high housing prices and rents.

Fiscal Considerations

Net public costs of providing services to cumulative downtown development are difficult to quantify. Appendix C, Table C-5, p. A-37, discusses approaches that have been attempted to address the net public costs of downtown development.

According to three of the studies, downtown development could result in an initial public fiscal benefit. Since revenues to the City would probably

increase at a slower rate than costs, because of Proposition 13 (California Constitution Article XIII A) limitations on property tax increases, there could be a time when cumulative costs of providing services to currently proposed and approved development would be higher than revenues provided.

- This would be the case only if no new revenue sources were found and the rate of development declined, and/or existing and future developments did not change hands, such that assessed values remained the same for long periods.

NOTES - Employment, Housing and Fiscal Factors

/1/ Indirect employment projections are based on the Bay Area Input-Output Model from Cooperative Extension Service, University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967-1974, July 1978. A multiplier of 1.18 was used for FIRE and 1.55 for construction.

/2/ 101 Montgomery Street Final EIR, EE 80.26, certified May 7, 1981, Appendix C, pp. 289-329, prepared by Recht, Hausrath and Associates, Urban Economists.

/3/ California Employment Data and Research Division, "California Labor Market Bulletin," January 1983.

/4/ Report of the Citizens' Housing Task Force, San Francisco, July 29, 1981, and Association of Bay Area Governments, Housing Needs Report, December 1981.

/5/ 123 Mission Street Final EIR, 81.183E, certified June 30, 1983, pp. 66-68.

/6/ Questor Associates, Feasibility of Performing a Housing Affordability Analysis, June 15, 1982. This study is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, 5th Floor.

/7/ Martin Brown, The Empire Group, letter, April 29, 1983.

/8/ San Francisco Tax Collector's Office, Payroll Expense Tax and Business Tax Ordinances (as of December 1980).

/9/ This assumption based on information contained in 466 Bush Street Final EIR, 81.175E, certified August 20, 1982, pp. 41-42 and Growth Management Alternatives for Downtown San Francisco, Environmental Science Associates, Inc., May 1983, p. IV.C.15.

/10/ California Labor Market Bulletin Statistical Supplement, State of California, Economic Development Department, August 1981.

/11/ Burke Delventhal, City Attorney, telephone conversation, September 7, 1982 and Diane Berry, City Attorney, telephone conversation, September 20, 1982. On August 5, 1982, the State Supreme Court ruled (City and County of San Francisco vs. Farrell) that increased payroll and gross receipts taxes adopted by the Board of Supervisors (Ordinances 113-80 and 119-80), approved by fewer than two-thirds of the voters in San Francisco, are constitutional and not violative of Proposition 13 (California Constitution Article XIII A).

IV. Environmental Impact

/12/ Taxable expenditures per office worker within the downtown were \$715 per year based on income of \$16,300 in 1974 (San Francisco Planning and Urban Renewal (now Research) Association (SPUR), Impact of Intensive High Rise Development in San Francisco, Detailed Findings, June 1975. The ratio of taxable expenditures to income was 0.0439; the ratio is independent of inflation.

/13/ Annual utility users' tax revenues were calculated as follows, with 1982 utility rates:

Water:	1.41 million cubic ft. per year x \$0.00414 per cubic ft. x 5% tax = \$300.
Gas:	22,868 therms per year x \$0.49 per therm x 5% tax = \$560.
Electricity:	3.75 million KWH per year x \$0.0707 per KWH x 5% tax = \$13,300.
Telephone:	366,390 gross sq. ft. x \$1.40 per sq. ft. per year x 5% tax = \$25,700.
TOTAL:	\$39,600 (rounded).

/14/ According to Bruce Bernhard, Muni Chief Accountant, telephone conversations, August 10 and 23, 1982, the average \$0.39 deficit per mile is based on 1980-81 Muni budget figures of an additional cost per ride (marginal cost) of \$0.71 and an average fare revenue per trip of \$0.32. Muni is unable to provide more recent data on cost and revenue figures per passenger. The \$0.39 figure is still considered valid (James Smith, Senior Administrative Analyst, Muni, telephone conversation, November 8, 1983). The deficit due to the project would be: 401,700 annual Muni trips x \$0.39 deficit per ride = \$156,663. The total annual Muni trips were derived using the 24-hour trips methodology specified in the "Guidelines for Environmental Impact Review: Transportation Impacts," Department of City Planning, September 1983.

/15/ Francis Nye, Transit Impact Fee Coordinator, San Francisco Public Utilities Commission, telephone conversation, November 14, 1983.

/16/ Sy Moubert, Manager of Public Information, BART, telephone conversation, October 4, 1983. The \$1.30 average deficit per ride is based on all operating costs and revenues and does not include capital expenditures.

/17/ 334,360 annual BART trips X \$1.30 net deficit per ride = \$434,668. Total annual BART trips were derived in accordance with the Transportation Impact Guidelines (see Note /14/).

- /18/ Department of City Planning, Downtown Plan Draft EIR, EE 81.3, March 16, 1984, pp. IV.B.17-IV.B.31 and Appendix G, pp. G.37-G.41.
- /19/ For a description of the methodology used to forecast residence patterns, see Appendix I, Downtown Plan DEIR, EE81.3, published March 16, 1984, pp. I.8-I.30. For a description of existing and forecast future residence patterns of C-3 District workers, see Downtown Plan DEIR, Section IV.D, Residence Patterns and Housing.
- /20/ Downtown Plan DEIR, p. IV.D.67.

- /21/ In order to ensure consistency with the cumulative transportation analysis and to respond to comments received requesting information on region-wide impacts, this section does not use the OHPP and 101 Montgomery formulas for estimating the number of workers who would live in San Francisco. These formulas are not used in this section because they do not incorporate all of the information required for the cumulative, regional perspective on residence patterns and housing. Specifically, the formulas only provide estimates of office workers living in San Francisco; they do not include factors for estimating workers living in other parts of the region. These formulas are applied to the project in the project-specific impact section of the EIR, on pp. 121-122.
- /22/ For the 1984 estimates of workers in the greater downtown area, the C-3 District estimates of employment and residence patterns prepared for the Downtown Plan Draft EIR were used as a base to which order-of-magnitude estimates for that year for the other downtown areas were added. The Transportation Guidelines were used to estimate employment and residence patterns in projects on the March 10, 1984 list for the greater downtown area. The workers associated with these new projects were added to the 1984 base year total estimate.
- /23/ As explained in the Downtown Plan DEIR, the use of existing space is expected to intensify by the year 2000. For example, office employment growth is forecast to exceed the growth of employment that would be accommodated by the development of new office space. From 1990 to 2000, more intensified use of existing space to accommodate employment growth would be equivalent to about a 40 percent increase in the net addition of office space forecast for that period. (see p. IV.B.41 in the Downtown Plan DEIR.)
- /24/ This subsection presents a summary of the discussion in the Downtown Plan DEIR (see pp. IV.D.77 - IV.D.82 and pp. I.1 - I.8).
- /25/ As explained earlier, there are several differences in the estimates of employment and residence patterns derived from these two approaches to cumulative analysis. The most important differences are apparent in the two employment estimates shown in Table 16A. The Downtown Plan employment totals are smaller than the total employment estimates for the greater downtown area, primarily because the latter estimate covers the C-3 District, plus other areas such as the South of Market area, Civic Center, and the northern waterfront. The growth for this larger downtown area is smaller than the C-3 District growth, however, because the list of downtown projects includes known projects, not all development likely to occur by 2000, and also does not incorporate changes in the use of existing space, such as increasing office employment densities.
- /26/ Association of Bay Area Governments, Projections '83. This report presents forecasts from 1980 to 2000 of population, employment, households and employed residents for each of the nine Bay Area counties.
- /27/ The distribution of downtown workers among the Bay Area counties is based on the residence pattern forecasts prepared for the Downtown Plan Draft EIR and on the Department of City Planning's Transportation Guidelines for Environmental Impact Review, September 1983.

J. GROWTH INDUCEMENT

The project would add about 300,000 net new gross sq. ft. of office and retail space (after subtraction of existing space on-site) to the Financial District. Employment at the site would increase by about 1,220, from about 260 to about 1,480. Occupants are not currently known, but would probably include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. Therefore, the increase in employment at the project site would not necessarily represent only employment that is new to San Francisco. If the building were fully leased and the office space provided by the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco would increase directly by about 1,220 jobs due to the project. Approximately 1,440 additional jobs would be supported indirectly in San Francisco through the multiplier effect (see Section IV.I. Employment, Housing, and Fiscal Factors, p. 120).

Any net increase in employment downtown, including that associated with the proposed project office space, would increase demand for retail goods and services in the area. Some of this demand would be met by the proposed retail space on the ground floor of the project, although the project would create a net decrease in retail space on the site.

The project would respond to a demand for office space in San Francisco's Financial District. The demand itself is independent of the project. Demand for office space continues the trend of growth in service sector and headquarters office activities and employment in San Francisco. Increases in downtown office space and employment would contribute, in turn, to continued growth of local and regional markets for goods, services, and housing. These growth-inducing effects would be less extensive if the vacancy rate for office space rises. Should this occur, projected increases in downtown employment would be less and the growth in demand for goods, services and housing would be lower.

IV. Environmental Impact

It is expected that some new downtown workers, including some of those in the project, would desire to live in San Francisco. Employment growth, however, may not directly correspond to increases in demand for housing and City services to residents, as some new jobs would be held by individuals who already live in the City but who previously either did not work or worked outside the City, by those who prefer to live in surrounding communities, or by those unable to afford or locate housing in the City. New downtown workers would also increase demand for housing in other parts of the Bay Area.

Increases in employment downtown would also increase demand for business services to the extent that new space would not be occupied by firms providing those services. In response, businesses providing these services would increase demand for existing space and, possibly, induce further new development.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified which would reduce or eliminate potential significant environmental impacts of the proposed project. Some of these measures have been adopted by the project sponsor or project architects and contractors, and thus are proposed as part of the project; some are under consideration; and some have been rejected. The mitigation measures and their status are discussed below. Measures under consideration, or measures rejected by the sponsor, may be required by the City Planning Commission as conditions of project approval.

HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

● MEASURES PROPOSED AS PART OF THE PROJECT

- Prior to issuance of a site permit, the project sponsor shall retain an historical archaeologist (or other qualified expert) to perform archival research and site inspection to determine the potential for discovery of cultural or historic artifacts on the project site. Results of this investigation shall be reported to the Environmental Review Officer.

The Environmental Review Officer in consultation with the Secretary to the Landmarks Preservation Advisory Board and the archaeologist shall determine whether the archaeologist should instruct all excavation and foundation crews on the project site of the potential for discovery of cultural or historic artifacts, and the procedures to be followed if such artifacts are uncovered.

V. Mitigation Measures

In the event of high probability of discovery of cultural or historic artifacts, the Environmental Review Officer may require that an archaeologist be present during site excavation and record a daily log of observations. The Environmental Review Officer may also require cooperation of the project sponsor in assisting such further investigations on site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

Should cultural or historic artifacts be found during project excavation, the archaeologist would assess the significance of the find, and immediately report to the Environmental Review Officer and the Secretary of the Landmarks Preservation Advisory Board. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

This maximum of four weeks shall include any other time periods for which the Environmental Review Officer has required a delay in excavation activities.

URBAN DESIGN AND VISUAL QUALITY

MEASURES PROPOSED AS PART OF THE PROJECT

- The project would retain and refurbish two existing low-rise, older office buildings with ground-floor retail uses, at 638-640 Sacramento St. and 653-655 Commercial St., which would maintain the low-scale, pedestrian oriented uses of Commercial and Sacramento Sts. on these two lots. (Existing tenants of these buildings would not be displaced.)
- The project tower would include ground-floor commercial uses fronting Commercial, Montgomery and Sacramento Sts., to maintain pedestrian interest and scale on those frontages.
- The project would include landscape elements, such as mature street trees and sidewalk plantings on Montgomery, Sacramento, and Commercial Sts. Landscaping would be implemented in consultation with the Department of City Planning and the Department of Public Works in order to maintain adequate sidewalk pedestrian flows, and to coordinate with other development on this block of Commercial St.

OTHER MEASURE

- The project sponsor could develop additional street-level retail space fronting Commercial and Sacramento Sts. in the 638-640 Sacramento St. building. This building, proposed to be retained and refurbished on the exterior as part of the project, is now used for office space only. This measure is under consideration by the project sponsor. A decision would be made after further investigation of the condition of the building and of potential effects on tenant displacement.

TRANSPORTATION, CIRCULATION AND PARKING

MEASURES PROPOSED AS PART OF THE PROJECT

- Should Ordinance 224-81, which requires the sponsor to contribute funds for maintaining and augmenting transportation service in an amount proportional to the demand created by the project, be declared invalid by the courts, the project sponsor has agreed to participate in any subsequent equivalent mitigation measures adopted in lieu thereof that are equitable and legal, which the City adopts to apply to all developments which are similarly situated.
- A member of the building management staff would be designated as a "transportation broker" to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, Muni, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for car pool and van pool information. This measure would reduce the transportation impacts of the project.
- Secure, safe bicycle storage facilities would be provided relative to the demand generated by the project for commuters and short-term visitors.
- During the construction period, construction truck movement would be permitted only between 9:00 a.m. and 4:00 p.m. to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering of the Department of Public Works, the Fire Department, Muni and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures and street excavation during construction, the project

sponsor would coordinate with construction contractors for any concurrent nearby projects (such as 456 Montgomery St. and Bank of Canton) that are under construction, planned for construction, or later become known.

- The Commercial St. frontage of the project would include improvements proposed in the San Francisco Center City Pedestrian Circulation and Goods Movement Study to enhance Commercial St. as a pedestrian-oriented street, including decorative striping of the roadway, conformity with no parking on the south side of the street, and sidewalk posts to deter illegal parking./1/ This measure would be carried out in consultation with the Department of Public Works and the Department of City Planning to insure maintenance of adequate pedestrian and vehicle movement conditions. Improvements in the public right-of-way would require approval by the Department of Public Works after a public hearing. The project would include decorative sidewalk paving and street trees along its Commercial St. frontage, in addition to the measures proposed in the Center City Circulation Study. The project sponsor would consult with the Bank of Canton to coordinate design of Commercial St. improvements with those proposed or completed as part of that project.
- The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic. Bus shelters would be incorporated into the building site plan providing adequate lighting, seating, garbage receptacles and other such amenities as a newsstand or phone booths, if such structures are consistent with maintenance of adequate pedestrian flows.
- Within a year of full occupancy of the project, the project sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. This measure would provide needed information to aid in transportation planning within the City. Alternatively, at the request of the Department, the sponsor would provide a fair and equitable in-lieu

contribution toward an overall transportation survey for the downtown area to be conducted by the City.

- While subsurface sidewalk vaults are discouraged, should they be needed, project sponsor would design subsurface sidewalk vaults to allow for possible future widening of adjacent streets and vault design shall be of sufficient strength to carry maximum vehicular live and dynamic loads. Design of the vault area to accommodate street trees could also be made, subject to Department of Public Works approval. In addition, should vaults exist or be installed as part of the project, project sponsor would accommodate and pay for the installation of all subsurface footings, supports and foundations as may be required for future public improvements such as street lights, street trees, trolley wire poles, signs, benches, transit shelters, etc. within project vault areas. Placement of such improvements is entirely within the discretion of the City.
- The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense.
- Building directories and signs for the service elevators would be placed in the loading area.

OTHER MEASURES

- Pacific Gas and Electric Company would coordinate work schedules with other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This would be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). This measure is outside the jurisdiction of the sponsor and would be implemented by CULCOP.

- - The loading area for the project could be redesigned to provide three off-street loading spaces, each 35 ft. in length, in compliance with City Planning Commission Resolution No. 9286 to mitigate project demand based on the Center City Pedestrian Circulation and Goods Movement Study formula. This measure could also include provision of on-site turning room, so that vehicles using the loading spaces would not be required to back in from Sacramento St. and conflict with movement of trolley buses of the 1-California line operating westbound on Sacramento St.
- The sponsor has rejected this measure because the proposed project loading spaces would meet Planning Code requirements, because provision of three loading spaces would reduce project frontage on Sacramento St. proposed for retail use, and because provision of on-site turning room would require about 3,500 to 4,000 sq. ft. of ground floor space, in addition to about 1,300 sq. ft. of loading space already proposed. This would reduce ground-floor retail space in the new building to about 5,900 to 6,400 sq. ft., compared to 9,900 sq. ft. in the proposed project.
- The project could provide project loading access from Commercial St., to avoid truck movement conflicts with Muni vehicles on Sacramento St., or could provide a loading entrance on Commercial St. and exit on Sacramento St. The sponsor has rejected this measure because provision of off-street loading with access from Commercial St. would reduce project retail frontage on Commercial St. and would not be consistent with sponsor goals to enhance Commercial St. as a pedestrian-oriented street with retail uses. The narrower width of Commercial St., compared to Sacramento St., would reduce truck maneuverability and increase potential truck movement conflicts with pedestrians, and with other vehicles on this street. (Turning room on Commercial St. would be further limited by the widened sidewalk under construction in front of the Old Sub-Treasury Building, as part of the Bank of Canton project, directly north of the project frontage.)

The City Planning Commission could require this measure as a condition of project approval.

- - The City could adopt and implement the transportation improvements described in the Downtown Plan. Should the Downtown Plan not be implemented, the City could act to implement the transportation mitigation measures described in Section V.E, Mitigation of the Downtown Plan Draft EIR. The Downtown Plan is presently under review: action on the Plan is expected by the City Planning Commission during Summer 1984. If approved by the Commission, some of the Implementing Actions would need approval by other decisionmakers, as described in Section V.E. of the Downtown Plan Draft EIR.

AIR QUALITY

MEASURE PROPOSED AS PART OF THE PROJECT

- During dry-season excavation, the general contractor would sprinkle unpaved demolition and construction areas with water at least twice a day to hold down dust. This would reduce particulate emissions (dust) by about 50%.

NOISE

MEASURES PROPOSED AS PART OF THE PROJECT

- As recommended by the Environmental Protection Element of the San Francisco Comprehensive Plan, an analysis of noise reduction requirements would be prepared for the project sponsor and recommended noise insulation features would be included as part of the project.
- The construction contract would include a requirement that the contractor muffle equipment so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, San Francisco Administrative Code, 1972).
- The general contractor would construct barriers around the site, and around stationary equipment such as compressors, to reduce construction noise by as much as five dBA.

- The general contractor would, to the extent possible, locate stationary equipment in pit areas or excavated areas to serve as noise barriers.
- Construction activities would be limited to hours between 7 a.m. and 7 p.m. to reduce disturbance to residents of buildings west of the site.

OTHER MEASURES

- To reduce construction noise effects in offices at 632 Commercial St. (KABL Radio), across the street from the site, office uses in that building fronting the street could be relocated to less exposed areas of the building. Alternatively, the project sponsor could pay for covering the Commercial St. windows with plywood, plastic, glass or gypsum board and for gasketing entry doors during project construction. The construction contractor and project sponsor could establish liaison with the building owner and tenants to schedule project construction activities to reduce noise effects in the office space.

These measures are under consideration by the project sponsor. The sponsor would make a decision on measures at the start of project construction, in consultation with building owners and tenants of 632 Commercial St. The decision on the measures would be based on the feasibility of relocation of offices within the building, and the potential need to maintain openable windows.

ENERGY

MEASURE PROPOSED AS PART OF THE PROJECT

- The project would be more energy efficient than required by State Administrative Code Title 24. To conserve electric energy, the project would include multiple light-switching; a variable air volume air-conditioning system; an outside-air/return-air economizer cycle; and low-flow plumbing fixtures. A carbon monoxide monitoring system would control garage ventilation, to avoid unnecessary operation of fans.

GEOLOGY, SEISMICITY AND HYDROLOGY

MEASURES PROPOSED AS PART OF THE PROJECT

- A detailed geotechnical report would be prepared by a California-licensed engineer for the project sponsor. The project sponsor and contractor would follow recommendations made in that report regarding project excavation and construction.
- Should dewatering be necessary, the level of the water table and potential settlement and subsidence would be monitored by the general contractor. The City could require a lateral and vertical settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during the dewatering. Control lines and benchmarks would be established for monitoring horizontal and vertical movement.
- If, in the judgment of City engineers, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt the settlement.
- If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found necessary by the Industrial Waste Division of the Department of Public Works. This measure would prevent sediment from entering the storm drain/sewer lines.

UTILITIES AND PUBLIC SERVICES

MEASURE PROPOSED AS PART OF THE PROJECT

- An evacuation and emergency response plan would be developed by project-sponsor or building-management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan

would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance by the Department of Public Works of final building permits.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

MEASURE PROPOSED AS PART OF THE PROJECT

- The project sponsor would mitigate the net housing demand of 270 units generated by the project, through off-site development or rehabilitation of vacant units in San Francisco. This could be accomplished either by direct sponsorship of a housing development or by provision of financial aid to a housing development, as provided for in the City's Office Housing Production Program (OHPP).^{/2/} The OHPP program allows units or "credits." Credits are given on a two- (or more) for-one basis for moderate- or low-income units. Multiple credits are allowed under the OHPP Guidelines for these units to "promote and stimulate the production of affordable housing" in the face of "economic considerations which dictate that economic incentives be given" for this purpose. The use of credits generally results in fewer units than the demand projected, while the units thus produced tend to be in the lower-income range. The City Planning Commission would determine whether proposed measures would mitigate housing demand caused by the project.

NOTES - Mitigation Measures

/1/ San Francisco Department of City Planning, 1980, Center City Circulation Program: Pedestrian Circulation and Goods Movement, Working Papers 1, 2 and 3, and Final Report.

/2/ Mayor's Office of Housing and Community Development, January 22, 1982, Citywide Affordable Housing Program.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED
PROJECT IS IMPLEMENTED

This chapter identifies impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or other mitigation measures that could be implemented, as described in Section V, Mitigation Measures, pp. 136-144.

CUMULATIVE OFFICE DEVELOPMENT

- The project would contribute to cumulative traffic and increased Downtown and cumulative passenger loadings on Muni, BART, and other transit carriers.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses the environmental impacts associated with these alternatives, and the reasons the alternatives were rejected by the sponsor in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative over the proposed project if the Commission believes the alternative were more appropriate for the site.

A. ALTERNATIVE 1: NO PROJECT

DESCRIPTION OF ALTERNATIVE

This alternative would entail no change to the project site as it now exists. All ten buildings currently occupying the site would remain, presumably in substantially the same conditions and uses that exist in 1983 (see Section III, Environmental Setting, pp. 26-47, for a discussion of existing conditions).

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

With this alternative, the site would remain substantially as described in Section III, Environmental Setting (pp. 26-47). With no project, existing structures on the site would be retained in their current condition. Visual, shadow, and wind effects now attributable to the buildings on the site would remain the same. Current levels of traffic, parking and transit demand; air pollution; noise; energy consumption; on-site employment; and public services demand would continue. Employment, housing and fiscal effects attributable to the project would not occur (see pp. 120-134). This alternative would result in neither the refurbishment of the exteriors of the two buildings proposed in the project to be retained, nor the proposed landscaping of a portion of Commercial St. Eight other buildings on the site would not be demolished.

SPONSOR'S REASONS FOR REJECTION

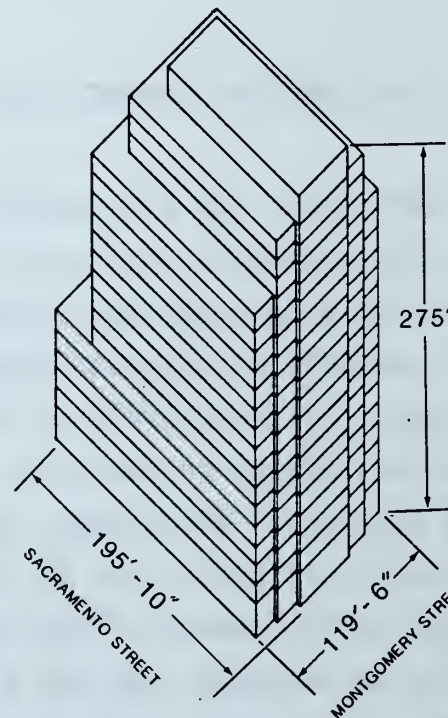
The project sponsor has rejected this alternative because it would not use the development potential of the site permitted by the Planning Code. The project sponsor has rejected an alternative location in San Francisco or elsewhere in the Bay Area because there are not more centrally located sites that would meet the project sponsor's objectives.

● B. ALTERNATIVE 2: NEW CONSTRUCTION COMPLYING WITH THE PROPOSED DOWNTOWN PLAN

Alternative 2 would be a project consistent with the controls proposed in the Downtown Plan, Proposal for Citizen Review, August 1983 (the plan), published by the Department of City Planning, containing proposed planning regulations for the Downtown. See Chapter IV.A., pp. 49a-52, for a description of the major features of the Downtown Plan related to the project site. Table 3 (revised), p. 51 compares the proposed project with provisions of the Downtown Plan and with Downtown Plan Alternatives 2, 2A and 2B, which are discussed on pp. 147-153c.

DESCRIPTION OF ALTERNATIVE

This alternative would develop a new structure on most of the site (Lots 5, 6, 6A, 7, 8, 9, 10, 11 and 28; see Figure 38). The alternative would demolish 638-640 Sacramento St. (Lot 11, to be retained with the project), to allow maximum development of floor area for the site permitted under the proposed Downtown Plan, within the height and bulk limits of the plan. 653-655 Commercial St., on Lot 27, would be retained. The alternative would use the total allowable 10:1 FAR, proposed in the Downtown Plan, or



● FIGURE 38
(Revised)
Alternative 2 -
Downtown
Plan Alternative

SOURCE:
Skidmore, Owings & Merrill

VII. Alternatives

261,700 gross sq. ft., plus 49,300 gross sq. ft. of additional floor area available with Transfer of Development Rights (TDR) from other sites in the C-3-0 district. (The plan would permit TDR from sites containing architecturally significant buildings or privately developed open space, if the additional floor area conforms to the plan's height, bulk and other controls for the receiver site.) The alternative would include about 23,000 sq. ft. of ground-floor retail, building service and internal circulation uses, which the plan would exempt from FAR calculations. Total floor area for the alternative would thus be 339,000 gross sq. ft. (including 653-655 Commercial St.), or a ratio of building area to site area of 12.9:1 (including ground floor space), compared with 366,390 gross sq. ft. and 14:1 for the project. The new building in this alternative would include a total of 334,000 gross sq. ft., compared with a proposed 337,150 gross sq. ft. of new construction for the project.

The plan proposes a height limit for the site of 250 ft. and would permit optional increases in building height: either a 10% increase in the height limit (25 ft. for the site) for reduced building profile and bulk, or additional height for mechanical or penthouse space within the volume formed by planes sloping inward from the outer edge of the roof at a 50-degree angle with the horizontal. The alternative would use the first option, and would be 275 ft., and 19 stories high, compared with 350 ft. and 26 stories for the project. The alternative would demolish 638-640 Sacramento St. (Lot 11, to be retained with the project), to allow maximum development of floor area for the site permitted under the proposed Downtown Plan, within the height and bulk limits of the plan. The plan would control bulk and floor size through Bulk Control Zone Charts A and B (pp. 92-93 of the plan), which relate dimensions to building height. The building would include setbacks on the west elevation at the 85 ft. level, and setback floors above 215 ft., to meet these requirements.

Building use would be the same as for the proposed project (office with ground-floor retail uses). This alternative would retain and refurbish the exterior of 653-655 Commercial St. (Lot 27), on the westernmost part of the site.

A comparison of features of this alternative with those of the proposed project is shown in Section IV.A., Table 3, p. 51.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

The lower height of this alternative, compared to that of the project, would be less visible in mid- and long-range views, primarily from the west (see Figure 39, p. 149). This alternative would cast shorter shadows than the project. The Downtown Plan defines critical times for sunlight access to Portsmouth Square as 8 a.m. to 4 p.m., Standard Time, from March 21 to September 21 (9 a.m. to 5 p.m., Daylight Time). During worst-case conditions in mid-March (and mid-September), the alternative would newly shade the southerly portion (about 12%) of Portsmouth Square at about 8 a.m. (8:48 a.m., Daylight Time in mid-September). At 8:30 a.m. in March (9:18 a.m. in September), the alternative would newly shade the southeasterly corner (less than 5%) of the square. (See Figures 40 and 41, pp. 149a-149b.) In comparison, the proposed project would shade 20% to 40% of the park at these times (see Figures 23-24, pp. 73-74). The alternative would not shade Portsmouth Square from early April through early September. Other shadow effects of the alternative would be similar to those of the project. At the base of the Transamerica Pyramid, with the proposed project, northwesterly wind speeds would be 11.7 mph; existing wind speeds are 12.2 mph./1/ With the alternative, northwesterly wind speeds would also be expected to exceed 11 mph at this location, but would not exceed 14 mph. All other projected wind speeds for this alternative would be expected not to exceed the 11 mph comfort criterion./2/ Some wind speeds may exceed the 8 mph criterion recommended as the maximum wind speed in the Downtown Plan. The proposed ordinance language which would implement the Downtown Plan distinguishes between a maximum of 11 mph for pedestrian areas and 8 mph for areas used for sitting.

The setback at the west frontage of the tower in this alternative would relate to building heights of older buildings on Commercial St., including development to the west. The proposed project would not have this setback. The alternative would have additional setbacks at the north, west, and south frontages above the 215-ft. level, compared to the project's tapered profile above the 255-ft. level.

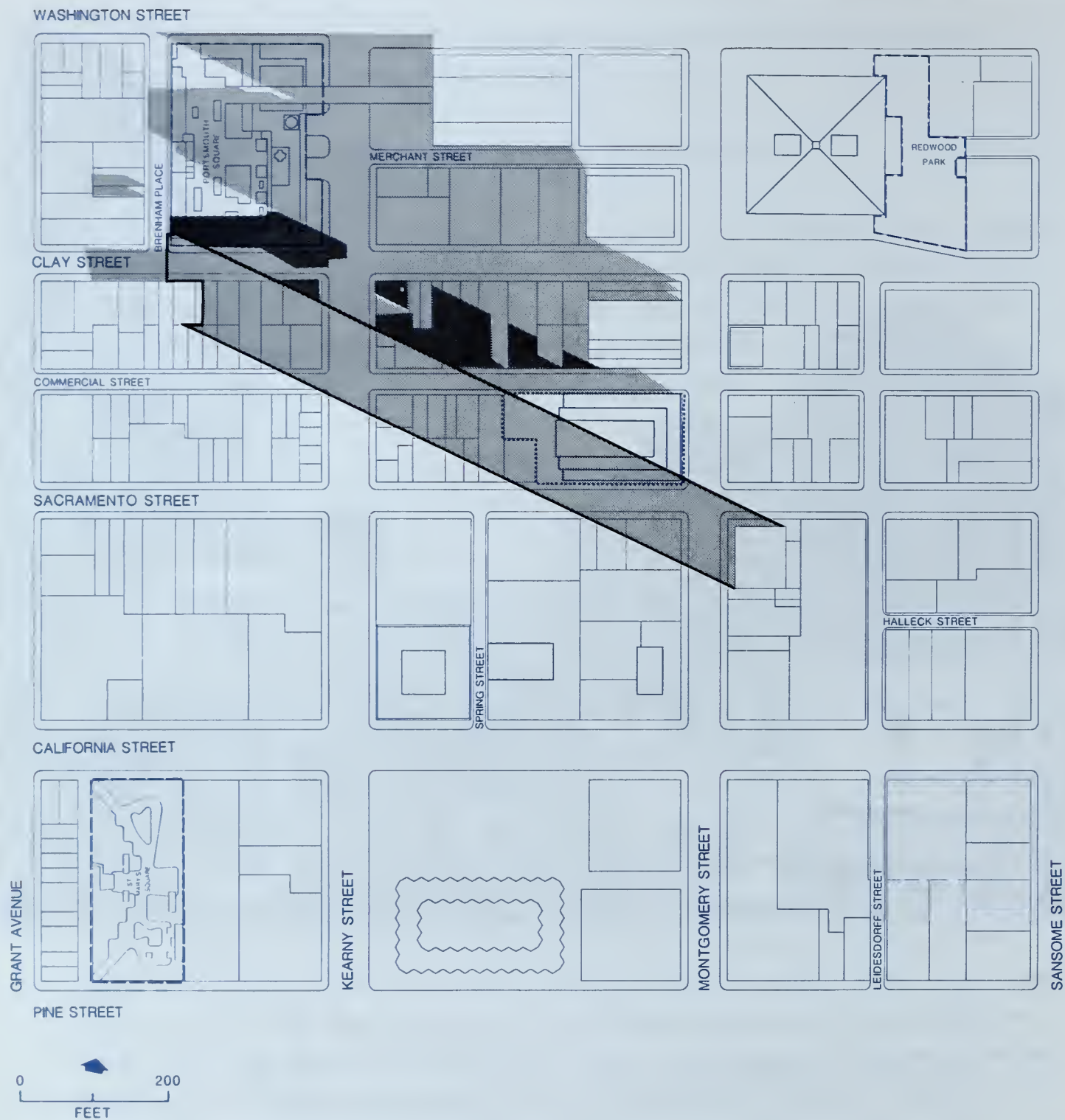


- ① Bank of Canton (under construction)
- ② Alternative 2: Downtown Plan Alternative
- ③ Citicorp Building (under construction)
- ④ 580 California (under construction)
- ⑤ Bank of America

● FIGURE 39 (Revised)

View of Alternative 2 -
Downtown Plan Alternative.
From Portsmouth Square

SOURCE
Environmental Science Associates, Inc.

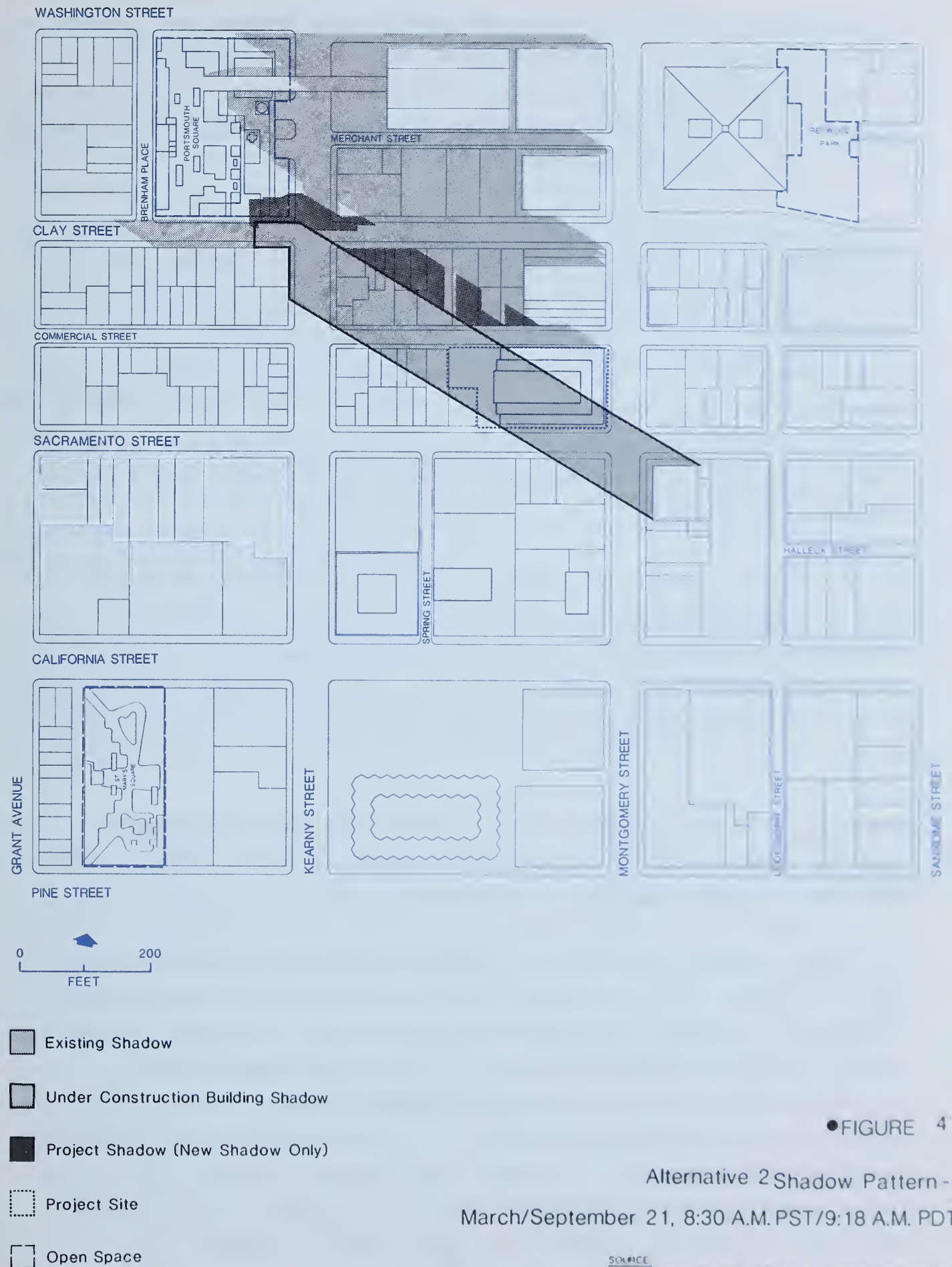


● FIGURE 40

Alternative 2 Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

-  Existing Shadow
-  Under Construction Building Shadow
-  Project Shadow (New Shadow Only)
-  Project Site
-  Open Space

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc



Because this alternative would replace all the low-rise buildings on the project site, except that on Lot 27, with a new 19 story-building, the alternative would alter the small-scale character of Commercial St., at the street facade, to a somewhat greater extent than the project. The alternative would be lower, overall, than the project.

The plan proposes that Commercial St., between Montgomery and Kearny Sts., be a pedestrian/service street, with improvements (widened sidewalks, sitting areas) in pedestrian areas, or in those portions of the vehicle right-of-way not needed for service, in accordance with the earlier Center City Circulation Study recommendations. The alternative would thus include widened sidewalks and retail uses along the Commercial St. frontage of both the new building and 653-655 Commercial St., proposed to be retained and refurbished. The project similarly proposes widened sidewalks, landscaping and retail uses along its Commercial St. frontage.

The plan would require a 1:50 ratio of open space to new building space as part of development in the C-3-0 district, or 6,680 sq. ft. for this alternative. The alternative would meet this requirement through project sponsor funding of development of off-site, public open space land, as allowed by the plan, or by development of public open space on the project's rooftop areas.

The Downtown Plan would require 1% of construction costs to be invested in publicly visible works of art, such as sculpture or murals. The alternative would meet this requirement.

Off-street loading space standards proposed in the plan would require four spaces for this alternative, which would be provided with access from the Sacramento St. frontage, as with the proposed project. In comparison, the project would include two loading spaces. Truck movements into the alternative's loading spaces could delay trolley buses on Sacramento St., as could occur with the proposed project. The plan discourages new long-term parking in the downtown core, limiting new long-term parking facilities to those needed to replace parking eliminated in the core. This alternative would have no parking, compared to 23 spaces for the project.

Demolition of one more existing building for this alternative would displace about 95 more employees than would the proposed project. On the assumption that the floor area per employee would be comparable in the existing and new space, the alternative would result in less net new employment on the site, and less housing demand, than the proposed project, in proportion to the reduced floor area. The alternative floor area would be about 92% of the proposed project floor area (over the whole site), resulting in about 1,100 net new employees and generation of about 245 new households in San Francisco, compared to 270 for the project. The alternative would probably have fiscal effects comparable to those of the proposed project, because the smaller floor area of this alternative would generate lower revenues, and demand proportionately fewer services.

Transportation, circulation, parking, air quality and energy impacts associated with the on-site uses would be proportionately less than those of the proposed project, because the floor area of the alternative would be about 92% of the proposed project floor area.

Construction noise impacts would probably be comparable to those of the proposed project. Energy consumption for operation of the building would be lower with the alternative, because of the greater energy efficiency of new construction compared to that of the existing on-site buildings, and the smaller floor area of the alternative.

SPONSOR'S REASONS FOR REJECTION

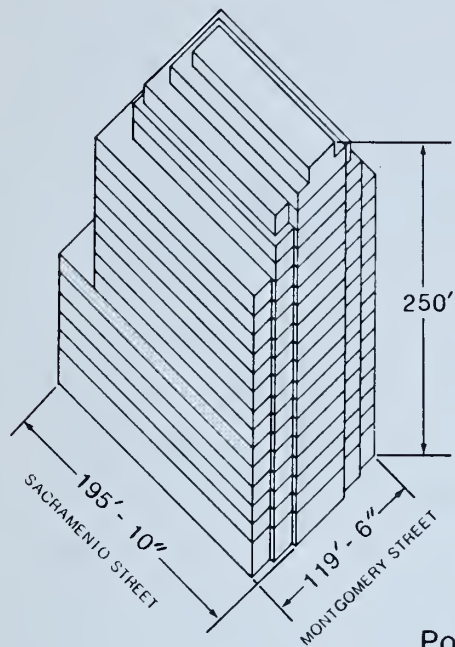
The project sponsor has rejected this alternative, because to obtain maximum development of the site, it would necessitate demolition of an additional low-rise building fronting on Commercial and Sacramento Sts. and would result in greater displacement of existing businesses in site buildings than would the project. The sponsor feels that the proposed project would be a superior design that would be compatible with existing development on Montgomery St. in the Financial District, and would maintain the scale of a portion of Commercial St.

● C. ALTERNATIVE 2A: DOWNTOWN PLAN ALTERNATIVE: NO SHADOW ON PORTSMOUTH SQUARE AT CRITICAL TIMES

Alternative 2A would be similar to Alternative 2, above, except that the new building would be 250 ft. and 17 stories tall, compared to 350 ft. and 26 stories for the proposed project, and 275 ft. and 19 stories for Alternative 2 (see Figure 42, p. 152a). Total floor area for the alternative would be 324,000 sq. ft. (including TDR from other sites and the retained 653-655 Commercial St. building). The ratio of building area to site area for this alternative would be 12.4:1, compared to 366,390 sq. ft. and 14:1 for the project and 339,000 sq. ft. and 12.9:1 for Alternative 2. The new building would include 296,000 sq. ft. of office space, and about 23,000 sq. ft. of ground floor retail, building service, and internal circulation uses, for a total new building floor area of 319,000 sq. ft.

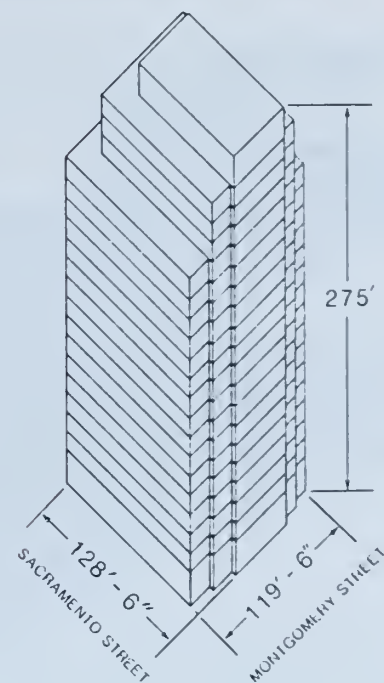
At 8 a.m. on March 21 (8:48 a.m. September 21) the alternative would shade an area about five feet deep along part of the southern boundary of Portsmouth Square (see Figure 43, p. 152b). The alternative would not shade any part of the square at 8:30 a.m. or later, Standard Time in March (9:18 a.m., Daylight Time in September). After late March and until mid-September, the alternative would result in no new shading of Portsmouth Square after 8 a.m. Standard Time (9 a.m. Daylight Time) between March 21 and September 21. These are critical times for solar access to the Square, as proposed in the Downtown Plan. Other shadow effects of the alternative would be similar to those of the project. That is, at other times of the day and year, and at other locations, the new shadow is less sensitive to the height of a structure at 505 Montgomery Street than is Portsmouth Square at the above specific times. (See Figures 26-27, pp. 76-77, and Figures 28-32, pp. 79-83.)

Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 88% of the proposed project floor area. All other effects would be similar to those of the project.



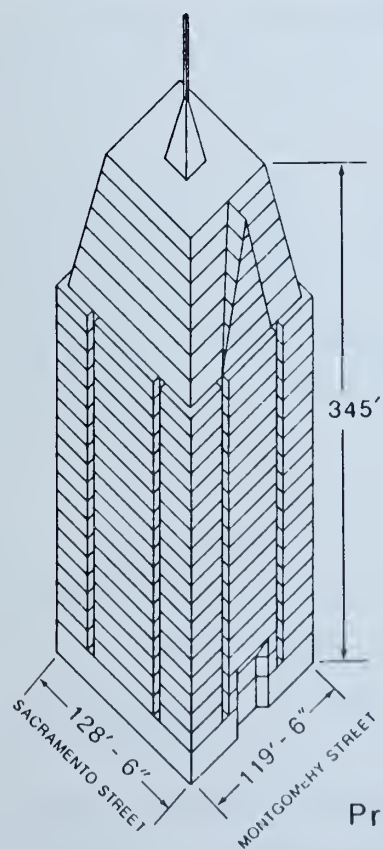
Downtown Plan
Alternative:
No Shadow on
Portsmouth Square
at Critical Times

SOURCE:
Skidmore, Owings & Merrill



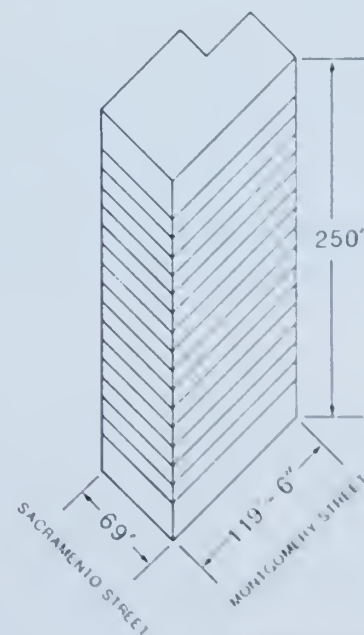
Alternative 2B -
Downtown Plan
Alternative, 10:1 FAR, No TDR

SOURCE:
Skidmore, Owings & Merrill



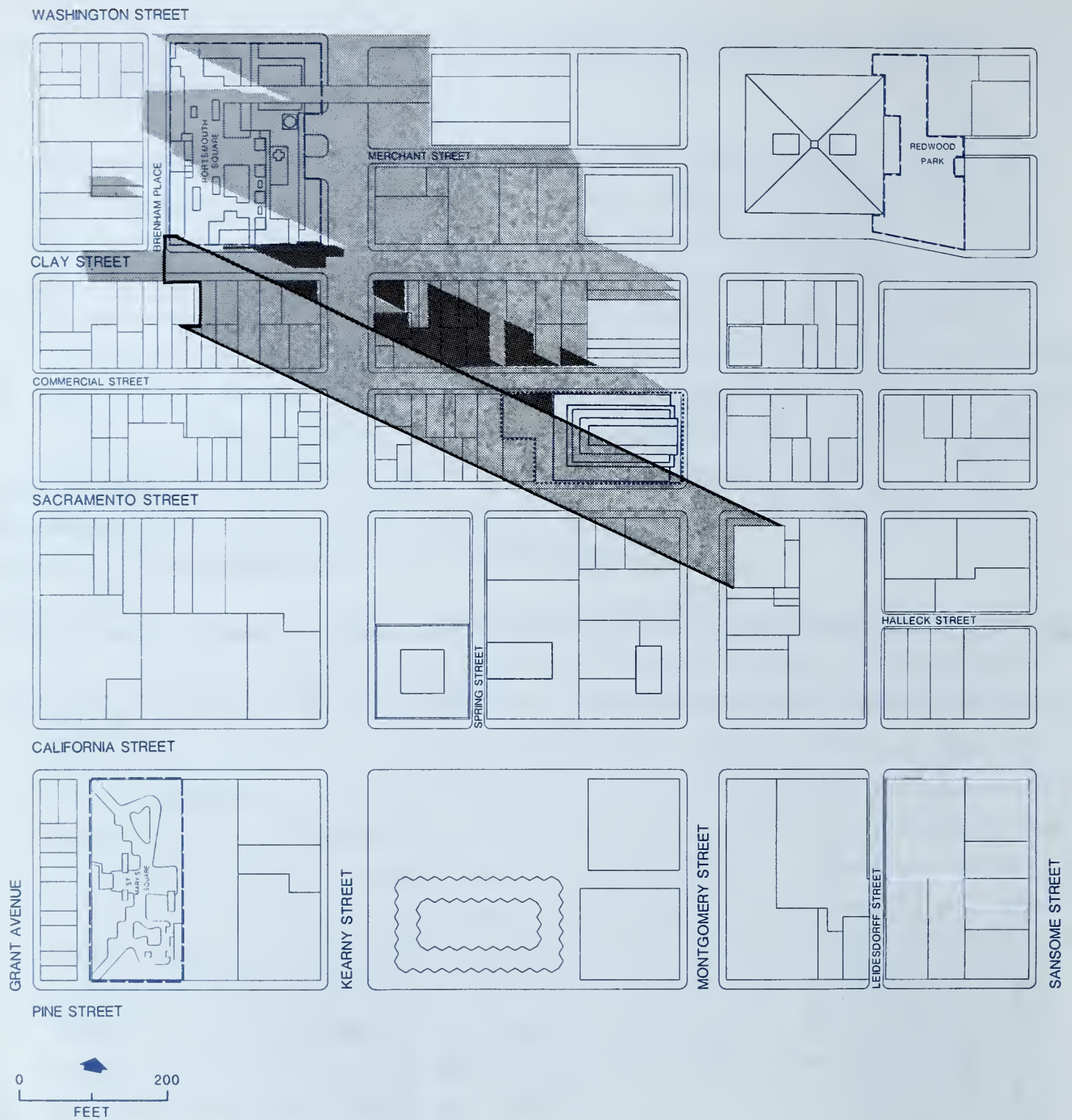
Alternative 4 -
Preferred Alternative

SOURCE:
Skidmore, Owings & Merrill



Alternative 5 -
New Construction on Lots
5, 6A and 7 Only

SOURCE:
Skidmore, Owings & Merrill



●FIGURE 43

Alternative 2A Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

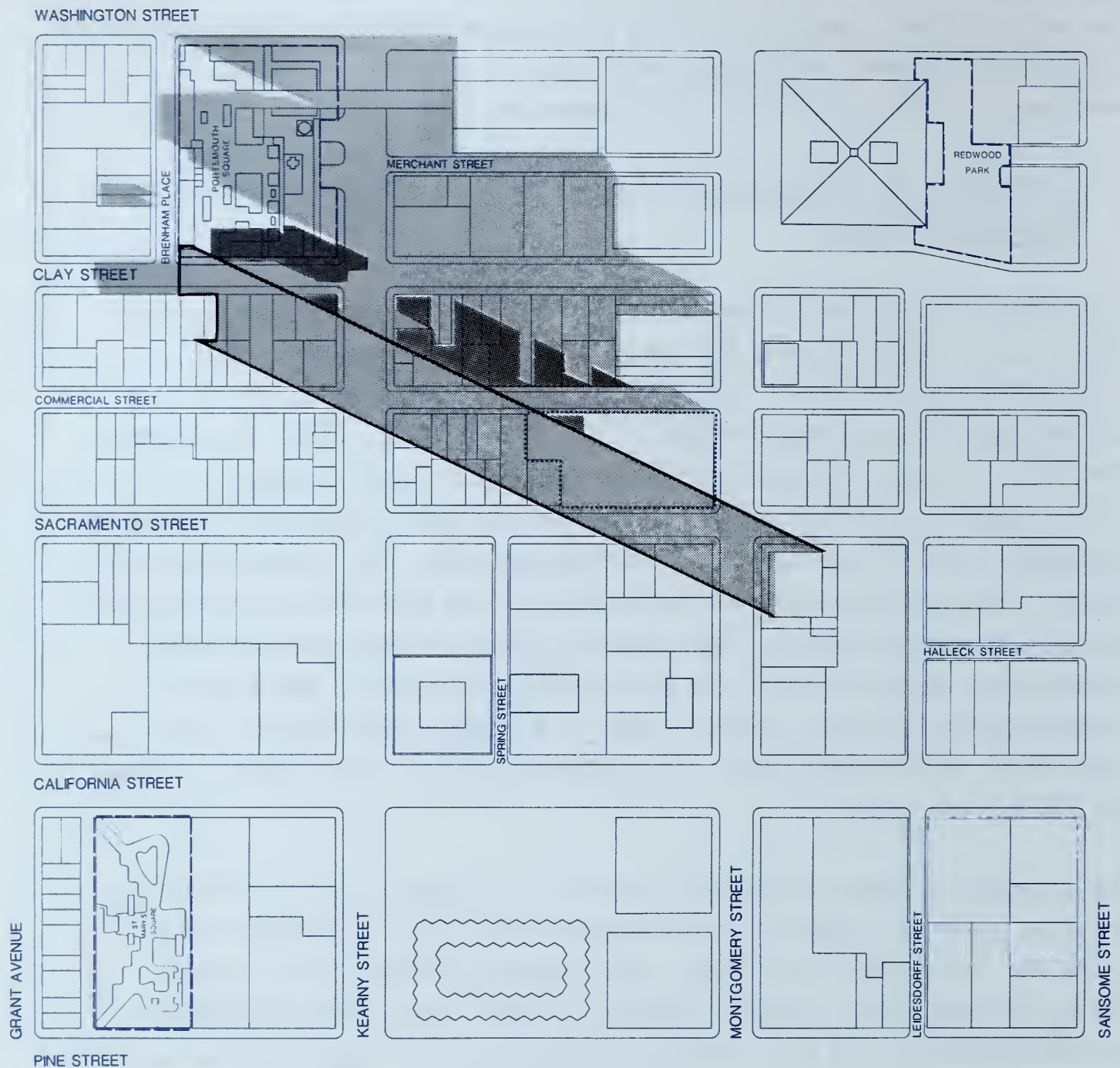
The project sponsor has rejected this alternative for the reasons described in Alternative 2, above, and because this Alternative would allow less development of floor area than with Alternative 2 or the proposed project.

- D. ALTERNATIVE 2B: DOWNTOWN PLAN ALTERNATIVE - 10:1 FAR, NO TRANSFER OF DEVELOPMENT RIGHTS

Alternative 2B would be a Downtown-Plan-conforming alternative with a total FAR of 10:1, the base office FAR proposed in the Downtown Plan. The alternative would be 275 ft. and 19 stories tall, compared to 350 ft. and 26 stories for the proposed project. (See Figure 42, p. 152a) Total gross floor area on the site would include 280,700 sq. ft.: 261,700 sq. ft. of office space, and 19,000 sq. ft. of ground-floor retail space which would be excluded from FAR calculations in the Downtown Plan. The alternative would retain the buildings at 638-640 Sacramento St. and 653-655 Commercial St., as would the proposed project. The ratio of total building area (including ground-floor area) to total site area of this alternative, would be 10.7:1, compared to 14:1 for the project. The new building would include about 242,800 sq. ft. of office space, and 9,900 sq. ft. of retail space, or about 252,700 sq. ft. total.




The alternative would conform to Downtown Plan height and bulk limitations. The Plan proposes a 250 ft. height limit for the site, and would permit a 10%, or 25 ft., increase in this limit, with reduced building profile and bulk in the upper tower. For a 275 ft. building on this site, the alternative's setbacks above the 215 ft. level would meet the Plan's bulk criteria (see Table 3, p. 51).

The lower height of this alternative, compared to that of the project, would make it less visible in mid- and long-range views, primarily from the west. This alternative would cast shorter shadows than the project. During worst-case conditions in mid-March (and mid-September), the alternative would newly shade the southerly portion of Portsmouth Square (less than 10% of the Square) at 8:00 a.m. in March (8:48 a.m., Daylight Time in mid-September). At 8:30 a.m. in March (9:18 a.m., Daylight Time), the alternative would newly shade the southeastern corner (less than 5%) of the Square (see Figures 44-45, pp. 153a-153b). These effects would be similar to those of Alternative 2,

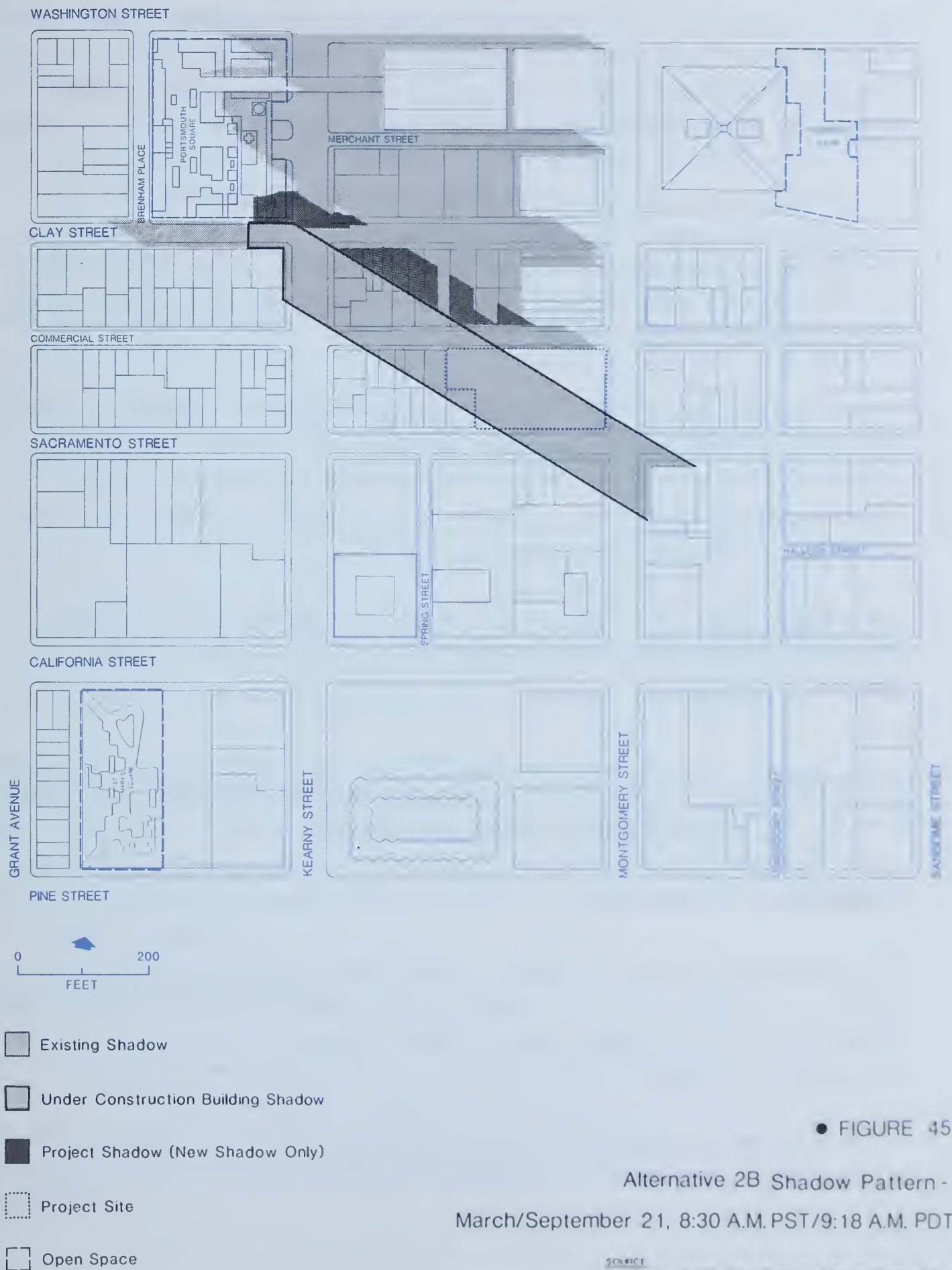


● FIGURE 44

Alternative 2B Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

-  Existing Shadow
-  Under Construction Building Shadow
-  Project Shadow (New Shadow Only)
-  Project Site
-  Open Space

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.



above. These effects would be similar to those of Alternative 2, above and would be greater than those of Alternative 2A. That alternative would have a larger floor area but lower overall height. Other shadow effects of the alternative would be similar to those of the project.

Off-street loading space standards proposed in the plan would require two spaces for this alternative, which would be provided with access from the Sacramento St. frontage, as with the proposed project. Truck movements into the alternative's loading spaces could delay trolley buses on Sacramento St., as could occur with the proposed project.

Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 77% of the proposed project floor area. All other effects would be similar to or less than those of the project.

The project sponsor has rejected this alternative because it would allow development of less floor area than with Alternative 2 or the proposed project."

E. ALTERNATIVE 3: PROJECT WITH NO PARKING AND WITH LOADING SPACES CONFORMING TO CITY PLANNING COMMISSION RESOLUTION NO. 9286

DESCRIPTION OF ALTERNATIVE

This alternative would be the same as the proposed project, except that the building would not include 23 basement level parking spaces, and would provide three 35-ft.-long off-street loading spaces, compared to two (one 35-ft. space and one 25-ft. space) with the project.

As no ramp to the basement parking area would be needed, the three loading spaces would use the same 36-ft.-wide curb cut as proposed for the project.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

The provision of no on-site parking would respond to San Francisco Master Plan Transportation Element, Downtown Transportation Objective 1, Policy 2, that calls for providing new short-term parking on the periphery of the Downtown core, and discouraging new parking within the core.

Provision of three off-street loading spaces, each 35 ft. in length, would be consistent with criteria of City Planning Commission Resolution No. 9286. The resolution states the intent of the Commission to require, as mitigation, off-street loading spaces based on loading space demand calculation in the Center City Pedestrian Circulation and Goods Movement Study./3/ (See Section IV, Environmental Impacts, pp. 106-108, for a discussion of this calculation.)

The provision of no on-site parking would reduce project-related vehicular traffic near the site that would otherwise be expected to use such parking. This would not change Levels of Service at nearby intersections, from those projected with cumulative development and project traffic. The alternative would increase by 23 parking spaces the theoretical net deficit of 14,800 spaces in and near the Downtown projected with cumulative development.

Availability of three off-street loading spaces would reduce the demand for existing curb loading spaces on the Montgomery St. frontage of the project site. Space required for the three 35-ft. spaces would slightly reduce available ground-floor retail and lobby space, compared to that of project. All other environmental effects of the alternative would be similar to those of the proposed project.

SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because the lack of on-site parking might affect the sponsor's ability to find tenants requiring parking for tenant visitors and sales and field personnel, and because the proposed parking would incrementally help meet the projected parking deficit in the Downtown area.

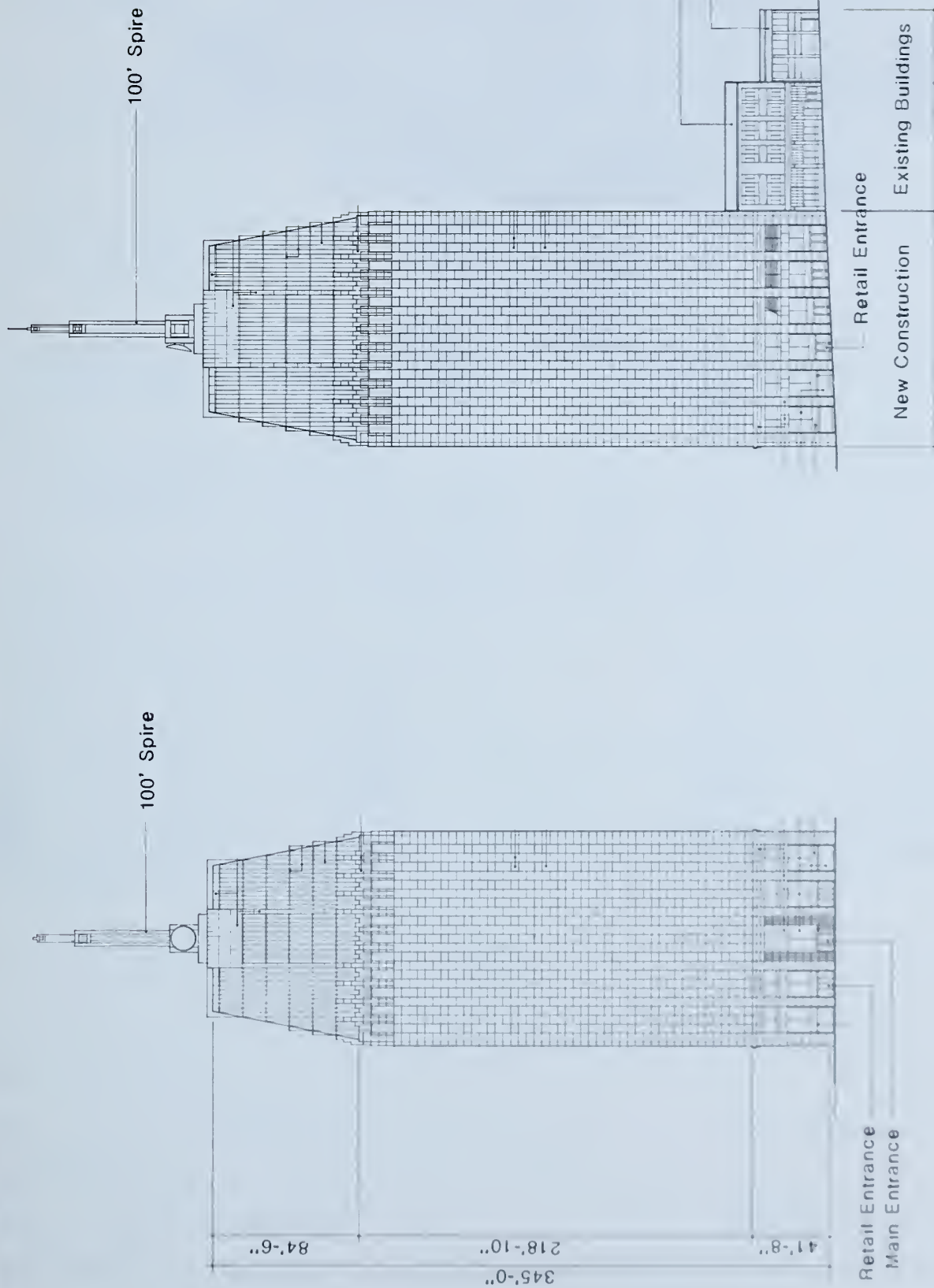
The sponsor has also rejected this alternative because the proposed loading spaces in the project would meet existing City Planning Code requirements, and because provision of three, larger spaces would reduce ground-floor retail space.

● F. ALTERNATIVE 4: PREFERRED ALTERNATIVE

This alternative would be similar to the proposed project, except that it would be 345 ft. (including a mechanical level) and 25 stories tall, compared to 366 ft. (a 350-ft. building plus a 16-ft. cooling tower level) and 26 stories for the project. The new building would have a total floor area of 310,400 sq. ft. (295,100 sq. ft. of office space and 15,300 sq. ft. of ground-floor retail and service area), compared to 337,150 sq. ft. for the project. Total floor area on the site would be about 339,600 sq. ft., for a ratio of total building area to total site area of 13:1, compared to 366,390 sq. ft. and 14:1 for the project.

The building design would be similar to that of the project, with a tapered building form above the 19th floor. (See Figure 42, p. 152a and Figure 46, p. 154b.) The overall height of this alternative would be about 20 ft. shorter than that of the proposed project; the alternative would cast shorter shadows. (See Figures 47-48, pp. 154c-154d.) Worst-case shadow effects on Portsmouth Square, in March and September, of this alternative would be similar to those of the project at 8:00 a.m. in March (8:48 a.m. in September). At 8:30 a.m. in March (9:18 a.m. in September), the alternative would newly shade about 20% of the square, compared to 30% for the project. At 9:00 a.m. in March (9:48 a.m. in September), the alternative would not shade the square, compared to about 10% for the project.

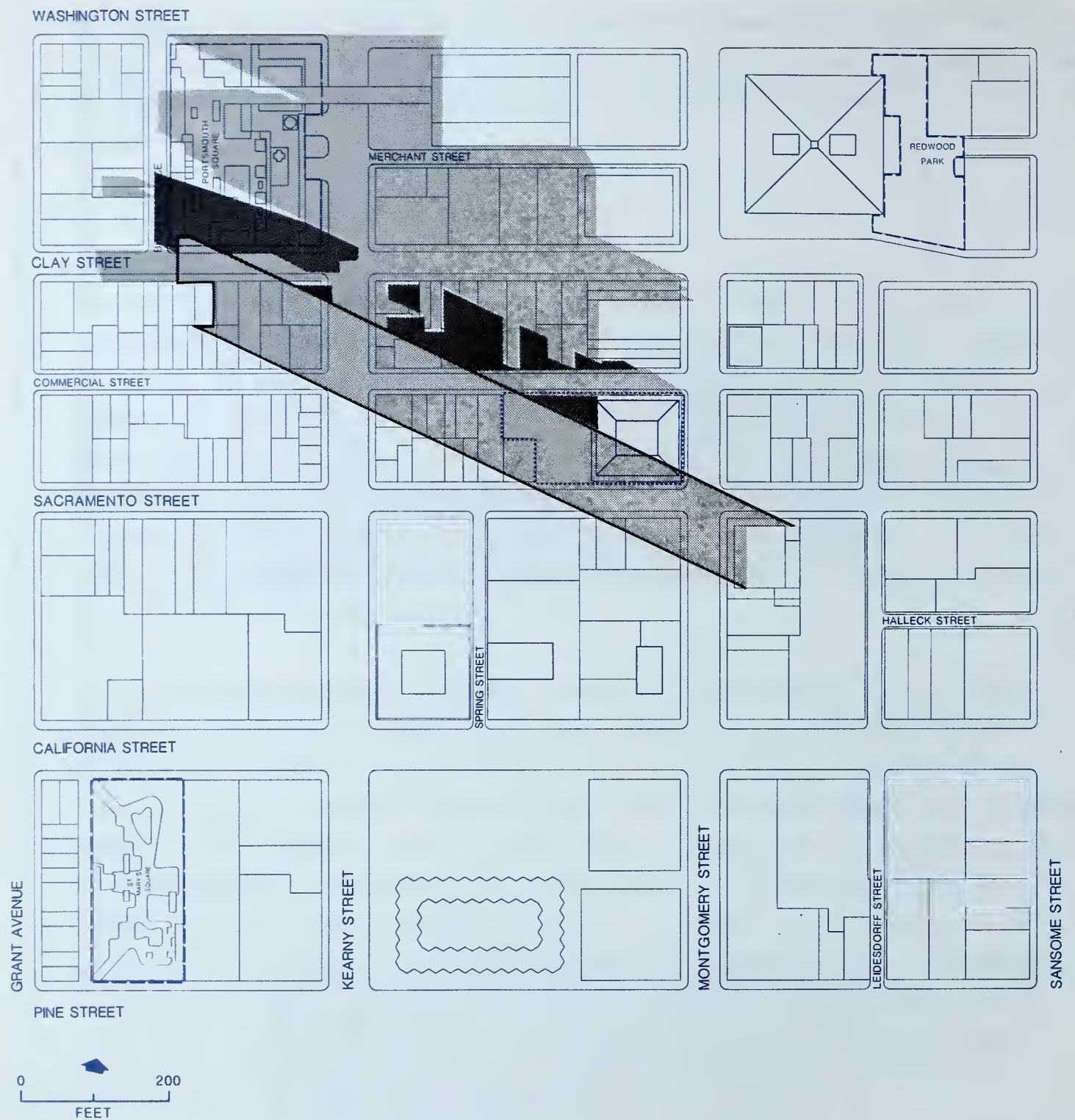
Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 92% of the proposed project's total floor area. All other effects would be similar to those of the project.



● FIGURE 46

Preferred Alternative - Montgomery and Commercial Street Elevations

SOURCE: Skidmore, Owings & Merrill



- Existing Shadow
- Under Construction Building Shadow
- Project Shadow (New Shadow Only)
- Project Site
- Open Space

● FIGURE 47

Alternative 4 Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.



The project sponsor is considering this alternative, because it would cause fewer shadow effects on Portsmouth Square, compared to the proposed project.

● G. ALTERNATIVE 5: NEW CONSTRUCTION ON LOTS FRONTING MONTGOMERY STREET ONLY

This alternative would develop a new building on Lots 5, 6A, and 7, the site frontage on Montgomery St. These lots total 7,150 sq. ft. Three buildings, 501-505 Montgomery St., 517-519 Montgomery St., and 527 Montgomery St. would be demolished. Other buildings on the site would be retained. The new building would be 250 ft. and 17 stories tall (compared to 350 ft. and 26 stories for the proposed project), and would have a total floor area of 107,250 sq. ft. (compared to 366,390 sq. ft. for the proposed project) (see Figure 42, p. 152a). The size of the building site, combined with requirements for lobby, elevator, and service space, would preclude provision of ground-floor retail space in the new building.

Total floor area on the site, for the new and retained buildings, would be about 156,000 gross sq. ft., for an FAR of about 6:1.

The lower height and bulk of this alternative, compared to that of the project, would be less visible in mid- and long-range views. This alternative would cast shorter shadows than the project. At 8:00 a.m. in March (8:48 a.m. in September, this alternative would shade the southeasterly corner (less than 5%) of Portsmouth Square, compared to about 33% with the project. By 8:30 a.m. in March (9:18 am. in September) this alternative would not shade the square.

This alternative would retain seven buildings, all "C" rated, fronting on Commercial St. and on Sacramento St. (615-617 Commercial St.; 627-629 Commercial St.; 653-655 Commercial St.; 616-618 Sacramento St.; 624 Sacramento St., 628-630 Sacramento St.; and 638-640 Sacramento St.). Retention of the seven buildings would maintain the low-rise scale of a greater portion of Commercial St. than would the project. In comparison, the project would retain two buildings, 653-655 Commercial St. and 638-640 Sacramento St.

The alternative would require one off-street loading space, which would be provided with access from Sacramento St., as with the project.

Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project because total floor area of the alternative would be about 40% of the proposed project floor area.

(To develop about 250,000 sq. ft. of gross floor area on this portion of the site, or a 10:1 FAR, would require a 500-ft., 27-story tower. This would exceed the existing Planning Code 400-ft. height limit and the Downtown-Plan-proposed 250 ft. limit for the site. Such an alternative would also require additional elevator shafts, and larger column sizes and utility shafts, which would reduce usable floor area.)

The project sponsor has rejected this alternative because it would not permit development of floor area allowed under existing controls or in the proposed Downtown Plan. The alternative would result in usable floor sizes of about 5,000 sq. ft. which, in the sponsor's opinion, would not be efficient or marketable.

NOTES - Alternatives

/1/ Bruce White, Ph.D., "Wind-Tunnel Studies of the 505 Montgomery St. Building", April 1983; available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

/2/ Bruce White, Ph.D., letter, October 22, 1983; available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco.

/3/ San Francisco Department of City Planning, 1980, Center City Circulation Program: Pedestrian Circulation and Goods Movement, Working Papers 1, 2 and 3, and Final Report.

● VIII. SUMMARY OF COMMENTS AND RESPONSES

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A. INTRODUCTION

This document contains summaries of the public comments received on the Draft Environmental Impact Report (DEIR), and on the Supplement to the DEIR, prepared for the proposed 505 Montgomery St. project, and responses to those comments. Also included are staff-initiated text changes and errata.

All substantive comments made at the Draft EIR public hearing before the City Planning Commission, January 12, 1984, and all written comments received during the Draft EIR public review period from November 25, 1983 through January 12, 1984, and the Supplement public review period from April 27, 1984 to May 29, 1984 are presented herein by direct quotation, edited to omit repetition and nonsubstantive material only.

Comments and responses are grouped by subject matter and are arranged by topics corresponding to the Table of Contents in the DEIR. Each group of comments is followed by its set of responses; the order of the responses under each topic follows the order of the comments. As the subject matter of one topic may overlap that of other topics, the reader must occasionally refer to more than one group of Comments and Responses to review all information on a given subject. Where this occurs, cross references are provided.

Some comments do not pertain to physical environmental issues, but responses are included to provide additional information for use by decision-makers.

These comments and responses will be incorporated into the Final EIR as a new chapter. Text changes resulting from comments and responses will also be incorporated into the Final EIR, as indicated in the responses.

B. LIST OF PERSONS COMMENTING

Susan Bierman, Commissioner, San Francisco City Planning Commission (DEIR public hearing comments, January 12, 1984)

Alton Chin, Chinatown Neighborhood Improvement Resource Center (DEIR public hearing comments, January 12, 1984)

John Elberling, San Franciscans for Reasonable Growth (DEIR Supplement comments, letter, May 7, 1984)

Howard Gong, Development Director, Chinese Community Housing Corporation (DEIR comments, letter, January 9, 1984)

Sue Hestor, San Franciscans for Reasonable Growth (DEIR public hearing comments, January 12, 1984)

Carl Imparato, San Franciscans for Reasonable Growth (DEIR Supplement comments, letter, May 28, 1984)

David Jones, San Franciscans for Reasonable Growth (DEIR Supplement comments, letter, May 28, 1984)

Beverly Karnatz, Co-Chairperson, Committee for Better Parks and Recreation in Chinatown (DEIR comments, letter, February 7, 1984)

Jonathan Malone, Secretary, Landmarks Preservation Advisory Board (DEIR comments, letter, December 13, 1983)

Odis Marlow, California Waste Management Board (DEIR Supplement comments, letter, May 23, 1984)

Bruce Marshall, Member, Steering Committee, San Francisco Muni Coalition (DEIR comments, letter, January 7, 1984)

Mara Melandry, Caltrans District 4 CEQA Coordinator (DEIR comments, letter, January 4, 1984 and DEIR Supplement comments, letter, May 29, 1984)

Yoshio Nakashima, Vice President, San Francisco City Planning Commission (DEIR comments, letter, January 12, 1984)

Richard H. Whitsel, Chief, Planning Division, San Francisco Bay Regional Water Quality Control Board (DEIR comments, letter, December 19, 1983)

Debra King, Transit Planner, Municipal Railway (DEIR comments, letter, January 10, 1984)

C. COMMENTS AND RESPONSES

PROJECT DESCRIPTION

PROJECT SPONSOR

COMMENT

"First of all, who is the Empire Group? What are they? What are their other projects? At least it's more than a lawyer; it has some names in the appendix. I am getting very suspicious of ones that seem to be out of the Netherland Antilles. But what is their experience and who are they? Maybe it's local money for a change. It will be an interesting novelty, but I don't believe it." (Sue Hestor)

RESPONSE

The Empire Group is a California corporation. Its principals are Martin E. Brown, Richard B. Mendelsohn and Stephen B. Savin, San Francisco residents who joined in 1978 to invest in and renovate existing San Francisco commercial real estate. They have been involved with the ownership and operation of a number of downtown office and retail properties, including the "A" rated Stock Exchange Tower at 155 Sansome Street, the location of their offices. (The Empire Group has upgraded internal maintenance of that building and restored original lighting and interior details in portions of the building.) The group states that it intends to maintain the standards of architectural merit of the Stock Exchange Tower in new development ventures. The Empire Group, together with Joseph P. DeLuca, also a San Francisco resident, have formed a partnership, 505 Montgomery Associates, to own, finance and operate the project, with a group of local financial institutions, headed by Columbus Savings and Loan Association./1/

SPONSOR'S OBJECTIVES

COMMENTS

"Page 1, Paragraph 1, Sentence 2: Does retention of 2 out of 10 on site rated buildings actually constitute preservation of the historic "scale of a portion of Commercial and Sacramento Streets?" Even with retention of 2 out 10 of the buildings on the site, construction of a 350 foot high structure will change the scale of the subject blocks.

"Page 13, Paragraph 1, Sentence 2: Same issue as per first comment."
(Jonathan Malone)

RESPONSE

The two sentences referred to in the comments are part of the statement of the project sponsor's objectives for the project. To clarify the description of the sponsor's intent, p. 1, paragraph 1, sentence 2 of the EIR is revised to read as follows:

"The sponsor's objectives are to realize a return on investment through the construction of a high-quality building which would contribute to the vitality of the area, and to preserve the scale of a portion of Commercial and Sacramento Sts., by retaining two existing buildings on the western portion of the site and using remaining development rights associated with those two buildings in a new building on the eastern portion of the site."

Page 13, paragraph 1, sentence 2 of the EIR is revised to read as follows:

"The sponsor's objectives are to realize a reasonable return on investment through the construction of a high-quality building which would contribute to the vitality of the area and be architecturally compatible with its context, and to preserve the scale of a portion of Commercial and Sacramento Sts. by retaining two buildings on the western portion of the

site and using remaining development rights associated with those two buildings, in a new building on the eastern portion of the site."

Also, see Table 4, pp. 61-64 of the EIR, for additional discussion of building scale effects on Commercial St., and p. 66, "Project Visibility".

RETENTION OF EXISTING BUILDINGS

COMMENT

"Page 24, Paragraph 3, Sentence 1: This sentence is unclear. How will the facades of the existing buildings be made compatible with the new building?"
(Jonathan Malone)

RESPONSE

Page 24, paragraph 3, sentence 1 of the EIR is revised to read as follows:

"The facades of the existing buildings to be retained are intended to be refurbished to be consistent with the context of Commercial St. Final design of the facade of the new building is also intended to be compatible with older development on Commercial St."

PROJECT APPROVAL REQUIREMENTS

COMMENT

"Page 25. It's talking about the procedures that have to be followed, and I think that whole discussion should be updated to the new ordinance and the new Conditional Use procedure. None of that is mentioned. I think that ought to be put in." (Commissioner Bierman)

RESPONSE

The following two paragraphs replace the last paragraph on p. 25 of the EIR:

VIII. Summary of Comments and Responses

"Following public review and a public hearing on this EIR, the City Planning Commission must certify the EIR as complete, accurate and objective. Under Ordinance No. 54-84, the Commission would then review the building and its environmental context as a Conditional Use, and adopt a resolution approving, approving with conditions, or disapproving the project. Upon project approval, the project sponsor would obtain demolition, encroachment (for sidewalk vaults and improvements in the public right-of-way), site, building, fire, electrical, and related permits from the Central Permit Bureau of the Department of Public Works."

"Ordinance No. 54-84, adopted by the Board of Supervisors on February 3, 1984, implements temporary interim controls on permit approvals. These controls prohibit approval of applications for office or tourist hotel developments of more than 50,000 net new gross sq. ft. in the C-1, C-2, C-3, C-M, M-1 and M-2 use districts. These interim controls are effective until August 25, 1984, or until permanent controls are signed by the Mayor, whichever is sooner. The purpose of the ordinance is to limit new development during review and adoption of planning controls deriving from the proposed Downtown Plan, Proposal for Citizen Review, August 1983.

"The ordinance includes certain exceptions to the interim controls. Among these are projects for which, prior to August 25, 1983, a building permit application had been filed, and a preliminary draft environmental impact report submitted to the Department of City Planning. The 505 Montgomery St. project falls within this category, and may be approved (during the period of interim controls) under Conditional Use procedures. The ordinance requires consideration by the City Planning Commission of this Conditional Use authorization in light of the rules and guidelines in the proposed Downtown Plan governing height, bulk and setbacks; offstreet loading facilities; building appearance; open space; sunlight access; pedestrian circulation; streetscape; and preservation of architecturally significant and contributory buildings."

Footnote /3/ on p. 25 of the EIR has been deleted.

NOTE - Project Description

/1/ Stephen B. Savin, The Empire Group, letter, February 7, 1984.

LAND USE AND ZONING

CHANGES IN LAND USE PATTERNS

COMMENT

"The second thing that I wish to direct your attention to is the maps on pp. 26 and 27 in the Environmental Setting. I would [like] you to look at this site and look at the surrounding sites. What is evident is the small parcel nature of the greater Chinatown area. And I think this area is part of Chinatown; it is not part of the Financial District. And what you see to the [north] of this site after the Bank of Canton, and that is not an accurate map now, [north] of this site, because it's my understanding that the Bank of Canton consolidated the parcels on their site, and I don't think that that is reflected there. What you have now is -- well, maybe that is [not] consolidated. I guess they kept them separate. What you have is a singular loss of small parcels when you look at this building, when you look at Washington/Montgomery and when you look at the pattern of encroachment up Montgomery and, unfortunately, also west to Chinatown. And this is not acknowledged in the EIR either in the setting or in the impacts, is the enormous -- I mean, we are starting to get in this area not quite the Bechtel block, not quite the PG&E block, but for this area of town, something pretty near close to that, a dramatic shift from small -- I don't know if they're 25-ft. lots, but the commercial equivalent of 25-ft. residential lots, and enormous parcels, enormous parcels under one ownership which are going to restrict small merchants because they have fewer people, fewer options, which is going to sanitize the areas so that you have even more banks and savings and loans, even more large institutions, even more large lobbies and a lot less diversity and, ultimately, the financial concentration of wealth in real estate into the hands of a very small number of people. And that changes the balance of the community; it changes the balance of the City. And I think

VIII. Summary of Comments and Responses

that needs to be reflected, because what you have here is reflected in all of these other ones as you push the Financial District up, up, up." (Sue Hestor)

RESPONSE

Figure 8, Planning Code Use Districts, p. 26 of the EIR, and Figure 9, Planning Code Height and Bulk Districts, p. 27 of the EIR, include base maps with existing lot lines in blocks near the project site. The lot line shown within the Bank of Canton site, across Commercial St. from the project site, is the location of the Old Sub-Treasury Building, which is being retained as part of that project.

Land use compatibility issues are discussed in the Initial Study for the project, pp. A-8 - A-9 of the EIR, and in Table 4, pp. 61-64 of the EIR. The following paragraph is added on p. 49 of the EIR, after the third paragraph:

"The project would be consistent with land use along Montgomery St. in the C-3-0 District, which includes the 601 Montgomery St. building, the Transamerica Pyramid, the Bank of Canton building, the Washington-Montgomery building and 456 Montgomery St.; the latter three buildings are under construction. These buildings generally replaced groups of two- to four-story retail-office buildings, as would the proposed project. West of Montgomery St., in the project vicinity, land uses include low-rise office, retail and residential structures in Chinatown, on lots that typically have 25 ft. to 40 ft. of street frontage. The project would contrast with the scale and lot configuration of those uses. The project would retain two low-rise buildings on smaller lots, west of the new building: 638-640 Sacramento St. and 653-655 Commercial St."

CUMULATIVE LAND USE EFFECTS

COMMENTS

"In reading it last night, I really was thinking about society and about planning. And what we really are charged with here is protecting this City.

VIII. Summary of Comments and Responses

And I don't think we are going to do it. I think we are creating an uncomfortable city, a city where you won't go downtown because you can't stand to get downtown. You will go downtown because you have to work for a living. But you won't go downtown for the fun of it. You won't go down to get a purse fixed. You won't go down to walk in Chinatown. You sure as hell won't walk where this buiding is going to go because you will be walking either in the street or right next to the street.

"Anyway, it is our obligation to keep this City special. And I don't think, even with our Downtown Plan, we really seriously are going to keep it special. I think what we're trying to allow for is legitimate. We are trying to allow for jobs and we're trying to allow for growth and for people to make money, but I wish we'd reassess what our direction is. I just think that we are making life miserable for people, especially people that have to work for their living." (Commissioner Bierman)

RESPONSE

The comment is acknowledged. The comment seems to be an expression of opinion related to matters covered in the EIR, and not a comment directly on the EIR itself, requiring a response.

COMPREHENSIVE PLAN POLICIES - COMMERCE AND INDUSTRY

COMMENT

"This is one of the first EIR's that I have really tried to read carefully. And as a former newspaper reporter, I kind of notice how a[n] ... ostensibly objective document can be written to be, in a way, slanted. And I see some elements of that in this document.

"In the Environmental Impact Section of p. 49, where it talks about the Master Plan elements . . . and the land use attributes of this project, it highlights a lot of elements, the Commerce and Industry element of the Master Plan and

how this project will contribute in fulfilling these Master Plan objectives, but it doesn't properly highlight some of the things that it doesn't do and some of the things that it takes away.

"In quoting on p. 49, it goes into and talks about all these objectives, but then, towards the end of the paragraph, the project would -- it talks [about], Policy 2 of Objective 6 is to guide 'office development to maintain a compact downtown core so as to minimize displacement of other viable uses.' The project would result in a net loss of up to 4,772 square feet of retail space.' It kind of goes around in a roundabout fashion. It states that the project is intended to respond to all these different objectives.

"Down here, it goes in a roundabout fashion. Right at the bottom, it says that, 'The net loss of retail space would not respond to Policy 2 of Objective 6.' Namely, that it would displace certain businesses on the retail level.

"It talks about the land use aspects of it and kind of highlights some of the contributions the project makes." (Alton Chin)

RESPONSE

Page 49, paragraphs 1- 3, of the EIR discuss the relationship of the project to the objectives and policies of the Comprehensive Plan, including how the project would and would not respond to those policies. For clarity, paragraph 3 is revised to read as follows (new or revised language is underlined):

"The project is intended to respond to Objective 4, Policy 2, to promote and attract economic activities of benefit to the City. The project would respond to Objective 6, to support San Francisco as a 'prime location for financial, administrative, corporate, and professional activity.' The project would respond to Policy 1 of this Objective, to encourage continued growth of downtown office activity. Policy 2 of Objective 6 is to guide 'office development to maintain a compact downtown core so as to

VIII. Summary of Comments and Responses

minimize displacement of other viable uses.' The project would respond to this policy in that the proposed office development would occur within the downtown core. It would not respond to the second part of the policy insofar as there would be a net loss of up to 4,772 sq. ft. of retail space on the site. (Tenant displacement effects of the project are discussed in Section IV.I., Employment Housing and Fiscal Factors, p. 120.) The sponsor is considering conversion of a portion of ground-floor office space at 638-640 Sacramento St. (641 Commercial St.) to retail uses."

Tenant displacement effects are also discussed on pp. 273-276 of this chapter.

HISTORIC, ARCHITECTURAL AND CULTURAL RESOURCES

RATINGS OF SITE BUILDINGS

COMMENT

"I would like to know if the seven 'C' rated buildings on the project site would constitute a special rating collectively that is above 'C'. I believe that this type of clustering of rated buildings is rare in San Francisco and should be preserved and protected. Other than residential, how many other clusterings are there in our City that should rate special consideration and protection?

"I would like to see a full face photo of each rated building related to this project and a short summary of the builder, architect, and tenants in these buildings through present day." (Commissioner Nakashima)

RESPONSE

As discussed on p. 29 of the EIR, and Appendix B, p. A-26, buildings rated "C" in surveys by the Foundation for San Francisco's Architectural Heritage (Heritage) are considered of contextual importance. As defined

by Heritage, on pp. 12-13 of Splendid Survivors, and presented on p. A-26 of the EIR, these are "buildings which are distinguished by their scale, materials, compositional treatment, cornices, and other features. They provide the setting for more important buildings and they add visual richness and character to the downtown area. Many C-group buildings may be eligible for the National Register as part of historic districts." Splendid Survivors, and the Downtown Plan, Proposal for Citizen Review, Department of City Planning, August 1983, identify groups of historically or architecturally important structures that merit protection as part of historic districts (Heritage) or conservation districts (The Downtown Plan). The Heritage-proposed districts include groups of "C"-rated buildings, as well as buildings rated "A" or "B". The Downtown Plan-proposed districts include groups of buildings defined as "significant" or "contributory" in the plan.

In the project vicinity, Splendid Survivors proposes a Commercial - Upper Montgomery Street District, east of the project site. This district would include four "A," six "B" and eight "C" rated buildings. Splendid Survivors also proposes seven other historic districts in the Downtown, each of which would include groups of "A," "B" and "C" rated buildings.

As discussed on p. 60 of the EIR, the Downtown Plan proposes designation of a Commercial-Leidesdorff Conservation District, directly east of the project site, to include seven "significant" (Category I, Retain Essentially Intact; or II, Retain, Allow Modification) and ten "contributory" (Category III, Encourage Retention, Allow Replacement; or IV, Encourage Retention as Part of Conservation District, Allow Replacement) buildings. (Downtown Plan architectural categories are described on pp. 56-57 of the EIR.) Contributory buildings in the Downtown Plan include buildings rated "B" by Heritage, outside of proposed conservation districts, or "B" or "C," within conservation districts, that contribute to the quality of an area which contains a number of highly rated buildings. The plan would encourage, but not require, retention of contributory buildings through use of transferable development rights. The district proposed in the Downtown Plan would have boundaries similar to those of the Heritage Commercial - Upper Montgomery district, except

that the latter would include 440 and 460 Montgomery St., the facades of which are being incorporated as part of the 456 Montgomery St. building, under construction. The plan proposes four other conservation districts in the Downtown, which would each include groups of "significant" and "contributory" buildings.

The buildings on the project site are not included in any of the districts proposed by Heritage or the Downtown Plan. Heritage, in a letter commenting on the architectural preservation aspects of the Downtown Plan, recommends that one building on the project site, 615-617 Commercial St. (proposed to be demolished), be added to the Downtown Plan's list of Category III Buildings (Contributory Building, Encourage Retention, Allow Replacement).^{1/} A Category III building is defined in the Downtown Plan as a "building rated very good in architectural quality, but lower than very good in relationship to the environment or vice versa, and located outside conservation districts."

Figures 13-17, pp. 54-55 and 57-59 of the EIR, include views of each of the rated (all "C"-rated) buildings on the project site. (See Figure 11, p. 30 of the EIR, and Table 1A, p. 178 of this chapter, for ratings of all on-site buildings.) Figure 14, p. 55, is a "full face" photograph of the "C"-rated 628-630, 624, and 616-618 Sacramento St. buildings.

Figures 17A-17E are added as pp. 59a-59e of the EIR, and pp. 173-177 of this chapter; they include additional, full-face views of the "C"-rated 527 Montgomery St., 615-617 Commercial St., 624 Sacramento St. (Commercial St. facade), 627-629 Sacramento St., and 638-640 Sacramento St. (641 Commercial St. facade).

Table 1A, p. 178 of this chapter, replaces the list of rated buildings on the site on p. 29 of the EIR, to include information from Heritage survey data on the architect of each building, if known. Mergenthaler Linotype was the original tenant of 616-618 Sacramento St.; original tenants of other buildings and subsequent tenants of all buildings are not indicated in the Heritage survey data. Current tenants of the buildings are given in Table 2, Existing Uses at Project Site, pp. 41-42 of the EIR.



FIGURE 17A

View of 527 Montgomery Street
(to be demolished)

SOURCE:
Environmental Science Associates, Inc.



FIGURE 17B

View of 615 - 617 Commercial Street
(to be demolished)

SOURCE:
Environmental Science Associates, Inc.



FIGURE 17C

View of 624 Sacramento Street (Commercial Street Facade)
(to be demolished)

SOURCE:
Environmental Science Associates, Inc.



FIGURE 17D

View of 627 - 629 Commercial Street
(to be demolished)

SOURCE
Environmental Science Associates, Inc



FIGURE 17E

View of 638 - 640 Sacramento Street -
641 Commercial Street Facade
(to be retained)

SOURCE:
Environmental Science Associates, Inc.

TABLE 1A: ARCHITECTURAL RESOURCES ON PROJECT SITE

<u>Building</u>	<u>Architect</u>	<u>Construction Date</u>	<u>Heritage Rating</u>	<u>DCP Survey Rating</u>
527 Montgomery St.	Unknown	1906	C	Not Rated
616-618 Sacramento St./a/	William Mooser & William Milwain	1907	C	Not Rated
638-640 Sacramento St. (641 Commercial St.)	A.A. Cantin	1907	C	Not Rated
615-617 Commercial St.	Unknown	1907	C	1
627-629 Commercial St.	Charles C. Frye	1910	C	0
628-630 Sacramento St.	Kittle Constr. Co.	1910	C	Not Rated
624 Sacramento St.	Unknown	1920	C	Not Rated
653-655 Commercial St.	James H. Hjul	1923	C	Not Rated
501-505 Montgomery St.	Unknown	1950	Not Rated	Not Rated
517-519 Montgomery St.	Unknown	1950	Not Rated	Not Rated

/a/ Originally known as Mergenthaler Linotype Building.

SOURCE: Foundation for San Francisco's Architectural Heritage

BUILDINGS IN THE VICINITY OF THE SITE

COMMENT

"Page 31, Paragraph 2, Sentence 4: Rewrite 'It is significant for having survived the 1906 earthquake and fire with only minor damage.' (Additions underlined.)" (Jonathan Malone)

RESPONSE

Page 31, paragraph 2, sentence 4 of the EIR is revised to read:

"It is the only high-rise building in the Financial District to have survived the 1906 earthquake and fire with only minor damage."

NOTE - Historic, Architectural and Cultural Resources

/1/ H. Grant Dehart, Executive Director, The Foundation for San Francisco's Architectural Heritage, letter to Dean Macris, Director, Department of City Planning, January 10, 1984, on file at the Department of City Planning, Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco, 94102.

URBAN DESIGN AND VISUAL QUALITY

PROJECT VISIBILITY

COMMENT

"Page 69, photos: It would be helpful to include on the adjacent page a photo showing the same view depicted as it currently appears." (Jonathan Malone)

RESPONSE

Figures 18A-22A are added to the EIR, on pp. 66a-70a, respectively, and pp. 180-184, respectively, of this chapter. These photographs correspond to Figures 18-22, pp. 66-70 of the EIR, but without the photomontage of the project or other under-construction or approved buildings.

TABLE 4: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE COMPREHENSIVE PLAN AND THE PROPOSED PROJECT

Policies for City Pattern

COMMENT

"Page 61, Policy 6: Relationship to Project. Will the widened sidewalks cut back into the existing buildings on Commercial Street?" (Jonathan Malone)

RESPONSE

The project sponsor proposes to widen sidewalks in the public right-of-way of Commercial St. (in the curb parking lane). As discussed on pp. 25 and 139 of the EIR, this would require approval from the Department of Public Works and Department of City Planning. No alteration of 638-640 Sacramento St. or 653-655 Commercial St. would be necessary for the widening.



FIGURE 18A

View East of Project Site
From Commercial Street, East of Kearny Street

SOURCE
Environmental Science Associates, Inc



FIGURE 19A

View East of Project Site
From Sacramento Street at Kearny Street

SOURCE:
Environmental Science Associates, Inc.



FIGURE 20A

View North of Project Site
From Montgomery Street at California Street

SOURCE
Environmental Science Associates, Inc.



FIGURE 21A

View of Project Site From Nob Hill

SOURCE:
Environmental Science Associates, Inc.



FIGURE 22A

View of Project Site From Portsmouth Square

SOURCE
Environmental Science Associates, Inc.

Policies for Major New Development

COMMENT

"Page 63, Policy 2: Relationship to Project. The design of the project would conflict with this policy." (Jonathan Malone)

RESPONSE

The following sentence is added at the end of the discussion of Policy 2, p. 63 of the EIR:

"The shape of the tower would contrast with older, low-rise buildings along Commercial and Sacramento Sts."

COMMENT

"On the urban design, the problems of the project, it gets kind of buried. It's buried in a table, Table 4 in Section IV.B. of this document [p. 63]. The specific problem is where it talks about Policy 4 of the Urban Design . . . element, 'Promote building forms that will respect and improve the integrity of open spaces and other public areas.'

"Now, if you read the Master Plan on this section, it goes into some detail about how -- it emphasizes the importance of open space and sunlight, something that is also emphasized in the Downtown Plan. But . . . just to use a newspaper phrase, the way it's played, I think, tends to underplay the Master Plan problems and problems of this project." (Alton Chin)

RESPONSE

Project sunlight and shadow effects are discussed on pp. 71-87 of the EIR. The following two sentences are added after the second sentence of the discussion of Policy 4, second column, p. 63 of the EIR:

"Comprehensive Plan policies call for limiting the height or effectively orienting new buildings so as not to prevent penetration of sunlight to parks and plazas. Project sunlight and shadow effects on Portsmouth Square are discussed on pp. 71-85."

COMMENT

"Page 63, Policy 5, Sentence 3: Relationship to Project. Please change "nearby" to "adjacent"." (Jonathan Malone)

RESPONSE

The discussion of Policy 5, p. 64 of the EIR, sentence 3, second column is revised to read as follows:

"The 350-ft. project would be taller than adjacent and nearby low-rise buildings to the west and immediately to the east, which are generally under 70 ft. in height."

PROJECT EFFECTS ON COMMERCIAL ST.

COMMENTS

"And when I talk about interpretation and slantedness sometimes, this really points up, the beginning of this EIR, where it talks about preserving the scale on a portion of Commercial St. -- I think it's kind of deceiving. It's sort of a case of, you know, is the cup half full or half empty? What it means is that two-thirds of Commercial St. would not be built up to 350 ft., which is some blessing, I suppose. But I really cannot accept it when it says it's preserving the scale when you're putting a 26-story building next to a series of two-and three-story buildings. That seems to be a misnomer to say that that is preserving the scale of a street."

"The importance of Commercial St. is that not only does it serve the people immediately in the immediate surroundings, but a lot of people work in the Financial District, walk [to] Chinatown for lunch and for dinner. And Commercial St. is one of the pleasanter ways to get there because of the low scale nature of the street, because of the lack of wind problems that are associated with Montgomery and Sacramento and Clay; it really is a pleasant place to walk up and forms sort of a gateway.

"The project sponsor proposes to do some nice things with Commercial St., with sidewalk widenings, street plantings and those things, and that is something that should be encouraged. Nevertheless, the height, the dominating height of these buildings, the Bank of Canton and 505 Montgomery, are going to negate some of the benefit that will be gained from these improvements on the alleyway." (Alton Chin)

"On p. 54 and 55, you have photographs of Commercial St. And Mr. Chin put good emphasis on the pattern of light and sunlight on Commercial St. What I would like to direct your attention to is the sunlight, the sense of space that is still there on that site, despite the encroachment on surrounding blocks of high-rises. And though Heritage may not want to wage a battle on these sites, I think that one of the things we have to acknowledge, apart from whether buildings are A, B or C, these are part of the character of downtown. And where are they going to be replaced? Are we to consign a whole style of small, human-scale architecture with small buildings to obliteration? Is that City Policy? Tell us." (Sue Hestor)

"I was disturbed about the C-rated buildings. I don't think that the EIR deals with the contextual importance. It does mention it, but it really doesn't show how special this area is. This area and Commercial St. have been mentioned for being a pedestrian walkway at times. What Alton [Chin] said about walking on Commercial St. being a good experience -- none of that comes through in this EIR. Maybe there isn't a way to get into an EIR the feeling of a place, but tearing down this square block, all but one of the buildings under our proposed Downtown Plan, is going to so radically change this area that you can't pretend that it isn't a dramatic change. And I would like that some way expressed so that when the Commission is faced with this project, we

have something to go on other than just, you know -- need something in writing about what is going to happen to that block and how different it will be." (Commissioner Bierman)

RESPONSE

Pages 163-164 of this chapter discuss the project sponsor's intent to preserve the scale of a portion of Commercial St., by retaining and refurbishing 638-640 Sacramento St., and 653-655 Commercial St., and using the development rights associated with these buildings on the new building on the eastern portion of the site.

Chapter III., Environmental Setting, Section C., p. 33, first paragraph, of the EIR, describes Commercial St. as follows. The underlined language has been added to the last sentence. "Commercial St., between Montgomery and Kearny Sts. in the project block, is characterized by small-scale, one- to four-story commercial structures. The 22-ft.-wide street, narrower than Sacramento or Montgomery Sts., provides a small-scale character in this portion of the Financial District, west of the 18-story Bank of Canton headquarters, under construction, and a means of access between Chinatown and the Financial District. (See Figure 12, p. 34.)"

Table 4, Relationship Between Applicable Urban Design Policies of the Comprehensive Plan and the Proposed Project, pp. 61-64 of the EIR, discusses project effects on Commercial St.:

In the discussion of Policies for Conservation, Policy 6, p. 62, the EIR states that, "The project tower would differ in form and scale from neighboring older buildings on Commercial, Montgomery and Sacramento Sts. . . . The project would introduce a high-rise building on this half of the block of two- to five-story buildings and would alter the setting of several City Landmark buildings in the project area. The project would retain two older low-rise buildings on Commercial and Sacramento Sts."

VIII. Summary of Comments and Responses

In the discussion of Policies for Major New Development, Policy 1, p. 62, the EIR states that "the scale of Commercial St. would be altered by the project and the adjacent Bank of Canton headquarters, under construction. These two buildings at Commercial and Montgomery Sts. would contrast with lower scale buildings to the west."

In the discussion of Policy 5, p. 64 [as revised on pp. 185-186 of this chapter, with revised language underlined in the following], the EIR states that "the 350-ft. project would be taller than adjacent and nearby low-rise buildings to the west and immediately to the east, which are generally under 70 ft. in height."

In the discussion of Policy 6, p. 64, the EIR states that "the project would be greater in bulk than older low-rise buildings nearby, outside the C-3-0 district, or in Chinatown to the west."

The following text is added to p. 65 of the EIR after the third sentence of the first paragraph:

"Together with the Bank of Canton headquarters, under construction, the project would alter the scale of development for about 130 ft. of the 420-ft. frontage of Commercial St. between Montgomery St. and Kearny St., from that of smaller, low-rise structures to that of high-rise development."

The EIR discusses the relationship of the proposed project to pedestrian improvements of Commercial St. described in the San Francisco Center City Pedestrian Circulation and Goods Movement Study, on p. 106, first (continued) paragraph, and p. 139, in the first (full) mitigation measure. The study describes Commercial St. as "a link from Embarcadero Center through the northern edge of the Financial District, to Chinatown (Eventual destiny of Commercial Street could be as a pedestrian spine through Embarcadero Center all the way to Chinatown.)"/1/

Wind conditions and effects of the project are discussed on pp. 35-36 and pp. 87-89 of the EIR. The EIR notes that only one location in the project vicinity, near the base of the Transamerica Pyramid, at the northeast corner of Montgomery and Clay Sts., and for northwest winds only, would exceed the 11 mph pedestrian comfort criterion, with existing or with proposed project conditions (and that the project would reduce the wind speeds at that location. At most other locations tested and for most wind directions the project would increase wind speeds, but would not cause them to exceed the 11 mph pedestrian comfort criterion; see pp. 88-89 of the EIR). Some wind speeds would exceed the 8 mph maximum for pedestrian activity areas suggested in the Downtown Plan.

The project would add shade to Commercial St. during spring, summer, and fall months. Project shadow effects on Commercial St. are discussed on pp. 72, 78 and 85 of the EIR, and illustrated in Figure 26, p. 76; Figure 27, p. 77; Figure 30, p. 81; Figure 31, p. 82; and Figure 34 (Sun Path Analysis), p. 86. The project would shade Commercial St. in midday and afternoon in spring and fall, and summer, and would affect primarily the Bank of Canton frontage, except on summer mornings when Commercial St. west of the project site would be shaded.

NOTE - Urban Design and Visual Quality

/1/ San Francisco Department of City Planning, 1980, Center City Circulation Program: Pedestrian Circulation and Goods Movement, p. 30.

SHADOW

USER DATA FOR PORTSMOUTH SQUARE

COMMENTS

"I am not saying here that you should not interpret in the EIR, that you shouldn't interpret what's happening with this project. But you should interpret fairly and show the impacts in a balanced way, the negative as well as the positive.

"One example of this is the treatment that it gives to Portsmouth Square. It doesn't really properly emphasize the importance of Portsmouth Square. It does a good job of doing a user survey, showing the number of people who use Portsmouth Square, but there is something that cries for interpretation, cries for saying, 'Look: Square foot per square foot, this is the most heavily used park in the City of San Francisco.' And it should give proper emphasis to this problem." (Alton Chin)

"Then we need to know exactly what the uses are in particular parts of that square. We have already ruined the Children's Playground part where we put the overpass, so that part of the park is gone. There is very little space left for some of the things. There is the tai chi in the morning. The elder men and women get out there. The men are out there very early. But I don't know what hours. So, rather than going by strict guidelines of 8:00 or 9:00, we need to know what the activities are and what they will not be able to do or what they will be uncomfortable doing if we allow the proposed project or if we do the Downtown Plan or if we do the alternative. The Downtown [Plan] Alternative 2A, or whatever we call it, that really wouldn't shadow the park, we need to have explanation of why that is important or if it's important." (Commissioner Bierman)

"After reviewing the EIR report we find that [the] project proposed at 350 ft., 26 stories would severely affect Portsmouth Square. The new shadow created would effectively contribute to 90% of the park to be in shadow (March 21 and September 21 between [sic] 8:00 a.m. and 8:48 a.m. respectively) and would cover the SW upper plaza entirely. This area is heavily used by elderly who need continuous warmth to be able to sit for periods of time." (Beverly Karnatz)

RESPONSE

Environmental Science Associates (ESA) conducted two user studies of Portsmouth Square in April 1983 and June 1983./1/ The main observation was by "behavioral mapping," a methodology whereby at prearranged times, observers coded the activities and locations of all people in Portsmouth Square. Observations were conducted on both weekdays and weekends to obtain a representative sampling.

The focus of the April study was to learn the number and location of users and the types of activities in the square. Observations were made from 8:00 a.m. to 4:00 p.m. on Thursday, April 7, Friday, April 8 and Saturday, April 16, 1983. Mapping was done hourly.

The focus of the June study, in addition to obtaining the number and location of Portsmouth Square users, was to observe user patterns as affected by sun or shade. The coding of activities was simplified, based on April findings, and a code was added to indicate whether a person was observed to be in the sun or the shade. Weekday observations were made on Wednesday, June 22; Thursday, June 23; and Friday, June 24, 1983 from 7:00 a.m. to 3:00 p.m. Weekend observations were conducted on Saturday, June 25 from 7:00 a.m. to 10:00 a.m., and on Sunday, June 26 from 7:00 a.m. to 3:00 p.m. Behavioral mapping was done every 15 minutes from 7:00 a.m. to 10:00 a.m. On Wednesday, Thursday and Sunday when observations continued until 3:00 p.m., activity and location mappings were done every half hour, without sun or shade coding after 10:00 a.m. (The main focus of the observations was for the 7:00 to 10:00 a.m. time period, because the proposed project would not shade the square after 10:00 a.m.; user data were collected until 3 p.m. on several days in April and June, for comparative purposes) The behavioral mapping in June was supplemented by still-camera and video recording of the activities and shadow patterns in the Square.

As noted by the first commenter, Portsmouth Square is a heavily used park. The Department of City Planning has cited the Chinatown area as one of the highest priorities for additional open space (DCP, Open Space and Recreation Program Element of the Comprehensive Plan, July 1975, p. 67). Concern over shadow effects of new development on the Chinese Playground, near Sacramento and Stockton Sts., resulted in enactment of lower height limits near that park in 1984. Information is not available to compare the the use of parks in San Francisco on a user-per-square-foot basis.

The following discussion focuses on use of Portsmouth Square in morning hours (8:00 a.m. to 10:00 a.m. Pacific Standard Time (PST) in April and 7:00 a.m. to 10:00 a.m. Pacific Daylight Time (PDT) in June). The

proposed project would not shade the square after 10:00 a.m. clock time, at any time of year. User data for April and June indicate that peak use of the square occurs between 11 a.m. and 2 p.m., clock time.

Similar ranges of activities and patterns of use were found in both the April and June data. Activities observed between 7 a.m. and 10 a.m. include: sitting or standing and socializing; sitting or standing and relaxing or watching others; playing cards under the pavilions (small tables, each under an approximately 15 x 15 ft. canopy); exercising; reading; eating; and walking through the park. The square serves as a meeting place for friends and acquaintances, as evidenced by observation of greetings exchanged and people engaged in conversation. The sun-shadow use data gathered in June shows that sunny areas are more heavily used; park users were also located in areas shaded by gaming pavilions, trees and buildings.

Figures PS-1 (base map) and PS-2 to PS-10, pp. 194-203 of this chapter, show the location and activities of persons in Portsmouth Square on April 7, 8, and 16, at 8:00 a.m., 9:00 a.m. and 10:00 a.m. PST. April 7 was sunny; April 8 and 16 were overcast. Temperatures on all these days were in the low to high 50-degree range. As illustrated, concentrations of users occurred at the tables under the pavilions at the eastern edge of the upper portion of the Square. The broadest range of activities and largest total number of users occurred in the central, open area (upper-level) of the square, located east and south of the elevators and north to the area west of the pedestrian bridge. This area, in which people walk and exercise, read newspapers, sit on the benches, and walk between the pedestrian bridge and the park itself or to and from the elevators, can be considered the center of activity in the Square in the morning hours. Few or no users (7% of the total, on average) were observed in the lower (Kearny side) portion of the square in morning hours.

The southwestern area of the Square functions differently from the central open area and the pavilion area and is not as heavily used. This may be partially because of the design (the grassy areas at the entrance near Clay St. and Brenham Place visually and physically block activity), and






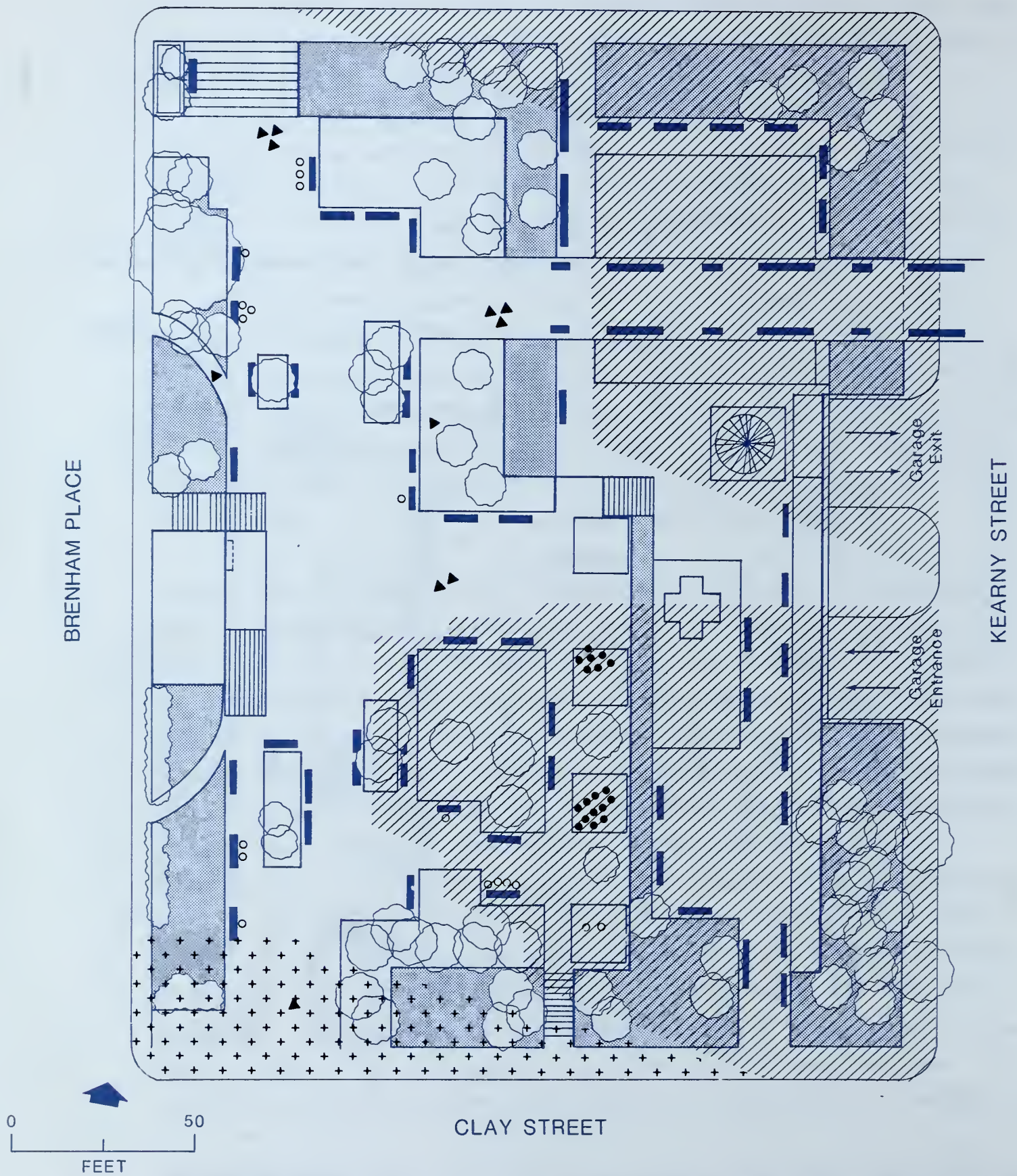
-  BENCHES
-  GRASSY AREAS
-  GAME PAVILIONS

FIGURE PS-

Portsmouth Square User Study
Base Map

SOURCE:
Environmental Science Associates, Inc., and William Owings & Moore (Base Map)

WASHINGTON STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	11	EXISTING SHADOW
• SOCIALIZING	18	PROJECT SHADOW
○ RELAXING	19	
TOTAL	48	

FIGURE PS-2

Portsmouth Square User Study-

Thursday, April 7, 1983 - 8:00 A.M. PST (sunny)

SOURCE:
Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)

WASHINGTON STREET

BRENHAM PLACE

KEARNY STREET

CLAY STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	6
• SOCIALIZING	46
○ RELAXING	41
TOTAL	93



EXISTING SHADOW



PROJECT SHADOW

FIGURE PS-

Portsmouth Square User Study

Thursday, April 7, 1983 - 9:00 A.M. PST (sunny)

SOURCE

Environmental Science Associates, Inc. and Skidmore, Owings & Merrill Map

BRENHAM PLACE

KEARNY STREET

CLAY STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	10
● SOCIALIZING	57
○ RELAXING	65
TOTAL	132

FIGURE PS-4

Portsmouth Square User Study-
Thursday, April 7, 1983 - 10:00 A.M. PST (sunny)

SOURCE:
Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)



ACTIVITIES (each symbol represents one person)

▲ MOBILE	17
● SOCIALIZING	14
○ RELAXING	18
TOTAL	49

FIGURE PS-5

Portsmouth Square User Study-
Friday, April 8, 1983 - 8:00 A.M. PST (overcast)

SOURCE
Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)

WASHINGTON STREET

BRENHAM PLACE

KEARNY STREET

CLAY STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	17
● SOCIALIZING	39
○ RELAXING	32
TOTAL	88

FIGURE PS-6

Portsmouth Square User Study-

Friday, April 8, 1983 - 9:00 A.M. PST (overcast)

SOURCE:
Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)



ACTIVITIES (each symbol represents one person)

▲ MOBILE	39
• SOCIALIZING	83
○ RELAXING	61
TOTAL	183

FIGURE PS-7

Portsmouth Square User Study

Friday, April 8, 1983 - 10:00 A.M. PST (overcast)

SOURCE

Environmental Science Associates, Inc. and Eldredge, Vining & Merrill (Base Map)

WASHINGTON STREET

BRENHAM PLACE

KEARNY STREET

CLAY STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	14
● SOCIALIZING	22
○ RELAXING	25
TOTAL	61

FIGURE PS-8

Portsmouth Square User Study-

Saturday, April 16, 1983 - 8:00 A.M. PST (overcast)

SOURCE:
Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)



ACTIVITIES (each symbol represents one person)

▲ MOBILE	14
• SOCIALIZING	47
○ RELAXING	45
TOTAL	106

FIGURE PS-9

Portsmouth Square User Study

Saturday, April 16, 1983 - 9:00 A.M. PST (overcast)

SOURCE

Environmental Science Associates, Inc. and Skidmore, Owings & Merrill (Base Map)

WASHINGTON STREET

BRENHAM PLACE

KEARNY STREET

CLAY STREET



ACTIVITIES (each symbol represents one person)

▲ MOBILE	34
● SOCIALIZING	95
○ RELAXING	63
TOTAL	192

FIGURE PS-10

Portsmouth Square User Study-

Saturday, April 16, 1983 - 10:00 A.M. PST (overcast)

SOURCE:

Environmental Science Associates, Inc., and Skidmore, Owings & Merrill (Base Map)

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because it is not at the junction of paths (pedestrian bridge and the elevator). The high number of trees in this area seems to differentiate use of this area from that of the rest of the square in the early morning hours.

Figures PS-2 and PS-3 (pp. 195-196) include existing building and proposed project shadows on the square at 8 a.m. and 9 a.m. PST on April 7. There are, and would be, no building shadows on the square by 10 a.m. on April 7. (No shadows are shown on the maps for April 8 and 16, which were overcast days.) Because of the nature of data and calculations used to project shadows on these figures, the shadows shown are considered accurate to ±five ft.

The user maps may also be compared to Figures 23-25, pp. 73-75 of the EIR, which show existing and proposed project shadows on Portsmouth Square on March 21, 8:00 a.m. - 9:00 a.m. As shown on Figures 23-25, in March/September the project would shade the less-used southwestern area of the square at 8:00(PST)/8:48(PDT) a.m., about half of the most heavily used upper-level central open area and pavilion area at 8:30(PST)/9:18(PDT) a.m., and part of the less-used lower-level area at 9:00(PST)/9:48(PDT) a.m. The comment above by Ms. Karnatz appears incorrect in citing 90% shadowing by the project between 8:00 and 8:48 a.m. The two times are local times with identical instantaneous solar conditions in March and September. As discussed on p. 72 of the EIR, these would be the worst-case shadow effects of the project. (The proposed project would not shade the Square at 10 a.m. and thereafter at any time of year.)

Several of the activities seem to relate to the sun more directly than others. For example, sitting, socializing, and reading newspapers, which occur mostly in the central portion of the square, may occur in certain locations because of the sun. Other activities, such as exercising, require an open, flat surface for sure footing and ease of maneuverability, independent of the presence of sun. The table activities, gaming and eating, are more dependent on the enclosure and table surface than on the sun.

TIME OF SHADOW STUDIES

COMMENT

I think we have to be very careful in the work on Portsmouth Square, that we have Daylight Savings Time, because it could mean that the park will be shadowed, not at 8:00 o'clock in the morning, but as late at 9:00 o'clock, 9:30 in April, May, June, July, August. We need to know exactly what time."
(Commissioner Bierman)

RESPONSE

The times shown on the shadow diagrams are clock times for cited months. The EIR discusses project shadow effects in March and September on p. 72. In the text and on the shadow diagrams, Figures 23-27 (pp. 73-77), March times are Pacific Standard Time (PST), and September times are Pacific Daylight Time (PDT). (Daylight time is in effect from the last Sunday in April to the last Sunday in October.) The figures and text indicate identical (solar) September conditions as occurring 48 minutes later than March clock time, rather than the expected one-hour clock change for Pacific Daylight Time, to account for differences between solar time and clock time in both March and September. These differences occur because the earth's orbit is not perfectly circular, and because of known variations in the earth's motion relative to the sun. June shadow conditions, p. 78 of the EIR text and Figures 30-32 (pp. 81-83), are PDT. As discussed on p. 72 of the EIR, March 21/September 21 conditions represent the worst-case project shadow effects on Portsmouth Square. From about April 21 to August 21, the project would cast no new shadow on the square. The appropriate descriptor (PST or PDT) is added to Figures 23-32, 40-41, 43, 45-46, and 48-49 of the EIR.

DOWNTOWN PLAN, SOLAR ACCESS TO KEARNY ST.

COMMENT

"It gives a lot of treatment to the Downtown Plan and what the Downtown Plan has to say about this kind of impact and this kind of project. And one of the

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sections where they talk about that, if I can find it, it says that Kearny St., the west side of Kearny St. should be protected from shading up until about 1:00 p.m. in the afternoon all through the year. And while it says that it protects the east side, that the east side of Kearny St. is not shadowed during the time that it's important to preserve sunlight, it doesn't state that it will cast a shadow, even though in the shadow diagrams it is clearly shown that it will cast shadow on the west side. It's on p. 87. I found it. 'The plan proposes to designate certain streets for mandatory sunlight access to sidewalks during midday hours. Kearny St., west of the site, is proposed as such a street, with sunlight access required on the east sidewalk from 11:00 a.m. (Standard Time), all year, and on the west sidewalk until 1:00 p.m., all year.'

"Now this is the part that I have a problem with. It says here, 'The project would not add shade to Kearny St. sidewalks after 11:00 a.m. at any time during the year.' Positive aspect of the project. Negative aspect, unstated. The project would add shade to Kearny St. sidewalks up until 1:00 p.m. Standard Time to the west side. But it doesn't say that." (Alton Chin)

RESPONSE

The cited paragraph, p. 87, first paragraph, first sentence, indicates that the Downtown Plan shadow context for sidewalks is "midday hours". The cited sentence, the last sentence of paragraph, p. 87 of the EIR, was therefore intended to indicate that after 11 a.m., and continuing through 1 p.m., the project would not shade Kearny St. sidewalks. The sentence is revised to read as follows:

"The project would not add shade to Kearny St. sidewalks between 11 a.m. (Standard Time or Daylight Time) and 1 p.m. (Standard Time or Daylight Time) at any time during the year. As shown in Figures 23-25, pp. 73-75, and Figure 30, p. 81, the project would shade parts of Kearny St. sidewalks before 11 a.m. in spring, summer and fall."

PROJECT EFFECT ON CLAYTON HOTEL SOLAR PANELS

COMMENTS

"The Chinese Community Housing Corporation (CCHC) is a non profit community based organization dedicated to the preservation and development of affordable housing in the Chinatown/North Beach neighborhood of San Francisco. One of our projects, The Clayton Hotel, will be affected by the development of the 505 Montgomery highrise project.

"The Clayton Hotel is located at 651-57 Clay Street between Kearny and Montgomery Streets (block 227, lot 43). It is an 82-room residential hotel providing affordable housing to low income people. The Clayton was rehabilitated in 1982. Part of our rehab work included the installation of an active solar water heating system. This system, expected to provide 68% of our hot water needs, will be in the shadow of the 505 Montgomery Street project, according to the project's EIR.

"Quite naturally, we are concerned that this shadowing will adversely affect the performance of our solar system.

"We believe the EIR for this project cannot be complete without describing the extent of this impact. Should the developer adopt one of the alternative schemes, we would like the final EIR to tell us whether the shadow impact will remain." (Howard Gong)

"One reason why it's stated that I was here also on behalf of the Chinese Community Housing Corporation is that we have a residential hotel, 83-room residential hotel that we renovated a couple years ago. Part of the renovation included an active solar water heating system on the rooftop. Some of you may have seen it before, a south-facing system. It saves up to 68%, I guess, of our utility costs in that area on water heating.

"The project would cast a shadow; according to your shadow diagrams, I think it would cast a shadow on the panels during the critical months during the morning hours and also in the winter. I think the EIR should note that somewhere and give it due treatment." (Alton Chin)

RESPONSE

The following paragraphs are added following the second full paragraph on p. 78 of the EIR:

"Figure 32A, p. 83a, illustrates sky exposure and sun path from the roof of the Clayton Hotel, across Commercial St. from the project. The proposed project would cast new shadow on the solar collectors there, for periods ranging from about one to two hours in the morning, during the months of August through December, and January through April, or nine months of the year. The project would have no shadow effect on the collectors after about 10:30 a.m. (solar time) in any of these months, nor at any time of day in the months of May through July.

"The solar collectors are useful primarily during the hours of about 9:00 a.m. to 3:00 p.m. (solar time). During these hours, the project is estimated to decrease the amount of solar energy received, by a maximum of about 15% in August/April, about 20% in September/March, and about 15% in October/February. In November, December, and January, the collectors are currently shaded for about one hour around noon by the Bank of America building, and for about one hour around 2:00 p.m. by the Hartford Building; both thus reduce the amount of solar energy received. Because there is less solar energy available to the collectors during these three months, therefore, the estimated percentage reduction due to the project would be greater than in other months, a maximum of about 30% of available solar energy. These represent maximum possible reductions because the project's shading of the collectors would occur before 10:30 a.m., a time before fog has usually lifted on foggy or overcast days when the amount of solar energy reaching the collectors is reduced.

"According to the system performance analysis by the Clayton Hotel's solar equipment installer, the solar water-heating system provides about 700 therms of energy per year, or about 38% of the building's total water heating load of about 1,800 therms per year./2a/ The project would decrease the existing solar contribution by about 15% to about 600 therms per year (using the estimated maximum monthly percentage reductions discussed above), or about 33% of the total annual water heating load,

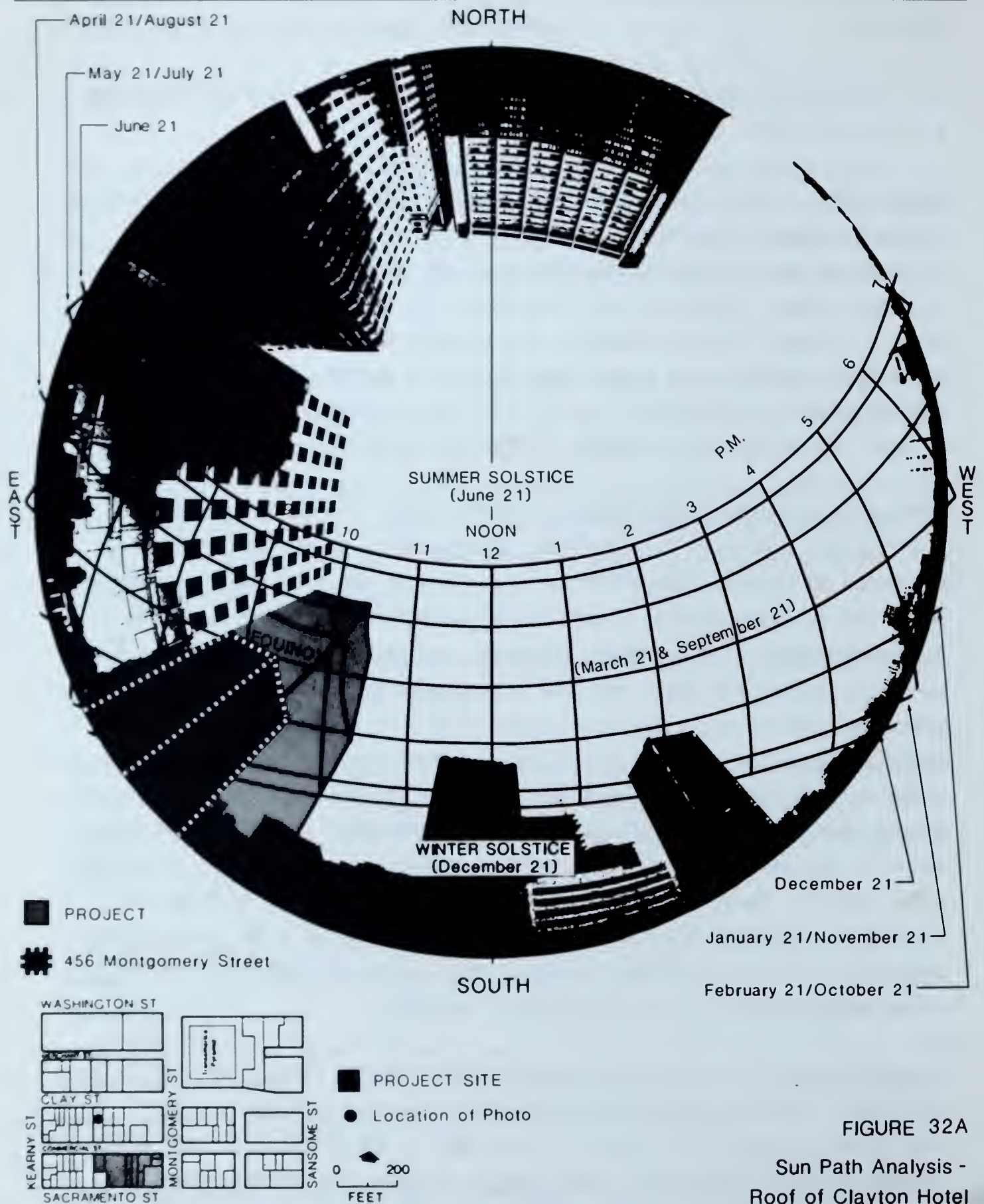


FIGURE 32A

Sun Path Analysis -
Roof of Clayton Hotel

SOURCE:
Environmental Science Associates, Inc.

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compared to 38% currently. (This assumes that the shading effects of existing buildings in the three-month period from November through January are reflected, as they appear to be, in the solar installer's performance analysis.)"

Figure 32A, p. 209 of this chapter, is added as p. 83a following Figure 32, p. 83 of the EIR.

The following footnote is added to p. 89 of the EIR:

"/2a/ The Solar Center, February 6, 1984, 'The Solar Center's System Performance Analysis (F-Chart Method) - Clayton Hotel'."

DOWNTOWN PLAN ALTERNATIVE EFFECTS ON CLAYTON HOTEL SOLAR PANELS

COMMENT

"Along with that, I'd like to know if the so-called Downtown Plan alternatives will, . . . what they will also do to the . . . solar panels [on the Clayton Hotel] as far as shadow impact." (Alton Chin)

RESPONSE

The 275-ft.-high Downtown Plan Alternative (Alternative 2, discussed on pp. 316-325 of this chapter) would decrease the existing solar contribution to the Clayton Hotel's water heating load by about 12%, on an annual average, compared to a 15% decrease from the project. Both Alternative 2A, Downtown Plan Alternative - No Shadow on Portsmouth Square at Critical Hours (discussed on pp. 325-328 of this chapter), and Alternative 2B, Downtown Plan Alternative - 10:1 FAR (discussed on pp. 329-333 of this chapter), would decrease the solar contribution to the hotel's solar water heating by about 8%, on an annual average.

NOTE - Shadow

/1/ "Portsmouth Square User Study," January 1984, prepared by Environmental Science Associates, Inc. A copy of the report is available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., Fifth Floor, San Francisco, CA 94102

SUPPLEMENT TO DEIR, APPROACH TO CUMULATIVE ANALYSIS

COMMENTS

"The Supplemental EIR has been changed to reflect the analysis methodologies for cumulative impacts contained in the Downtown Plan [Draft] EIR. In fact, most of the text for this supplement is directly from the Downtown [Draft] EIR. For this reason, my comments on the analyses in this EIR are no different than the identical comments I intend to submit on the Downtown Plan [Draft] EIR.

"I do not believe the draft Downtown EIR or the supplemental EIR for this project provide an adequate, accurate, and objective assessment of the impacts resulting from cumulative office development in San Francisco. For this reason I believe this document falls far short of the requirements of the California Environmental Quality Act.

"Because the analysis of the Downtown Plan [Draft] EIR and this EIR are identical, the attached comments on the Downtown Plan [Draft] EIR are therefore submitted as my comments on the [Supplement to the] Draft EIR for the proposed 505 Montgomery Office Project. To the extent the draft Downtown Plan [Draft] EIR is modified to accommodate my concerns, this EIR should be modified accordingly. To the extent the draft Downtown Plan [Draft] EIR is not modified to meet my concerns, this EIR should be modified to meet these concerns." (David B. Jones)

"The Supplement incorporates by reference and relies heavily upon the Downtown Plan Draft EIR (DPDEIR), which is still in its public comment period. The methodologies employed therein are quite controversial, particularly in the areas of Transportation and Housing, and have a great bearing on the cumulative impacts predicted in this Supplement, with consequent impact on the necessary mitigation measures for 505 Montgomery. Therefore, we believe that it is important to the CEQA process to incorporate by reference into the Comments on this Supplement all comments submitted on the DPDEIR by close of its public comment period, June 4, 1984. SFRG's own comments on the Draft will be quite extensive and will therefore apply directly to this Supplement as well." (Carl Imperato)

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RESPONSE

The purpose of a cumulative impacts analysis in an EIR on a single building is to provide information on the impacts of the single project in relation to other related past, present and reasonably foreseeable future projects; this information shows the project's contribution to possible cumulative effects. This analysis must conform to standards of reasonableness and practicability. It is neither reasonable nor practicable to convert an EIR on a single project into a program EIR on an area plan as is being requested.

The Downtown Plan Draft EIR uses employment growth forecasts as a basis for impacts analysis of a plan for downtown. It provides a useful and informative contrast to the cumulative-list-based analysis also included in the 505 Montgomery Street and EIRs for other downtown office projects. As the Downtown Plan Draft EIR was published on March 16, 1984, it did not seem appropriate to ignore its information or results in the 505 Montgomery Street EIR, whose Draft EIR was published on November 28, 1983, before the Downtown Plan Draft EIR. The 505 Montgomery Street DEIR included only a list-based cumulative analysis. The 505 Montgomery Street EIR, with the Supplement to the Draft EIR, contains cumulative impact analyses using both methods.

Department staff believe the 505 Montgomery Street EIR, with its responses to comments, represents an adequate, accurate and objective analysis of impacts of the project and of its contribution to the possible cumulative impacts of reasonably foreseeable similar projects. The ultimate decision on this issue will be made by the City Planning Commission, pursuant to San Francisco Administrative Code Chapter 31, Section 31.28(e).

Although relevant portions of the Downtown Plan Draft EIR cumulative analysis are presented in the 505 Montgomery Street EIR, and comments in this analysis are responded to in detail, it is not necessary nor appropriate to respond to all comments provided on the Downtown Plan Draft EIR in an EIR on a single building project. The Downtown Plan Draft EIR covers a plan to rezone and establish detailed criteria for development of

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a major area of downtown San Francisco; it is and must be far broader than an EIR on an individual building project. Over 800 pages of comments were received on the Downtown Plan DEIR on topics ranging from employment projections methods to transfer of development rights for historic buildings to standards for wind speed regulations. Many, if not most, comments on the Downtown Plan Draft EIR will be irrelevant to impacts of a single proposal for about 300,000 sq. ft. of new space and its contribution to cumulative impacts.

For the same reasons that the courts, several years ago, found that pendency of the Downtown Plan EIR did not preclude City Planning Commission action on individual projects, the fact that comments have been received on that program-level EIR does not require that the Commission suspend consideration of an individual project EIR while that project's EIR is effectively made the equivalent of an EIR on rezoning of an entire district in downtown San Francisco. It is thus not appropriate or necessary to suspend action on this project EIR until any possible modifications to the Downtown Plan DEIR may be made in response to comments on that EIR. If these were required, then the pending certification of the Downtown Plan EIR, potentially occurring weeks (or months) after all information is ready for consideration of the individual project EIR, would impose a de facto moratorium on actions on private projects. All comments received within their comment periods on the 505 Montgomery Draft EIR and Supplement to the Draft EIR have been responded to, including those that asked about methodologies used in the Downtown Plan DEIR when those methodologies were presented in the 505 Montgomery EIR.

The project EIR uses Downtown Plan Draft EIR information, because to ignore it would mean ignoring a substantial body of information otherwise available to the public and the decision-maker. The project EIR should not present merely the list-based method for analyzing cumulative impacts when another method has been explored in detail in another Department-prepared EIR, albeit an EIR on a much more comprehensive project.

To clarify the differences in the two approaches to cumulative analysis, the following text and new Table 2A are added in Chapter IV., Environmental Impact, pp. 48-48b of the EIR, after the second full paragraph on p. 48:

"INTRODUCTION TO CUMULATIVE IMPACT ANALYSIS

"Two approaches are used to assess cumulative impacts. The "Downtown Plan forecast" approach presents a cumulative scenario for C-3 District land use change, employment growth, and residence patterns between 1984 and 2000. Its forecasts are based on analysis of the effects of C-3 District planning policies in the context of underlying local and regional economic conditions. The "list-based" approach uses the March 10, 1984 list of projects in the greater downtown area that are under formal review by the Department of City Planning, approved, or under construction, as the basis for estimating future activity. The space in projects on the list represents foreseeable future development which is added to the base year (1984) level of developed space.

"In the subsequent cumulative impact sections, the project's effects are compared to the overall effects within each of these two cumulative contexts. Because of several essential differences between the two approaches, however, estimates of cumulative effects derived from the two approaches cannot be directly compared.

"The following Table 2A, p. 48b, highlights the differences between the Downtown Plan forecast approach and the list-based approach. Generally, the basic difference is that the Downtown Plan approach accounts for changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach is limited to known projects of certain types and assumes unchanging characteristics and behavior. These two approaches are alternative means of assessing the future cumulative context for downtown development. They use different available data sources and information and different assumptions, as summarized in Table 2A."

TABLE 2A: COMPARISON OF CUMULATIVE IMPACT ASSESSMENT METHODOLOGIES

	<u>Downtown Plan Forecast Approach</u>	<u>List-Based Approach</u>
Focus of Impact Assessment	<ul style="list-style-type: none"> - Impacts of C-3 District land use and employment within context of rest of City and region 	<ul style="list-style-type: none"> - Impacts of land use and employment in the greater downtown area including C-3 District and adjacent areas) within context of rest of City and region
Timeframe	<ul style="list-style-type: none"> - 1984 base year - Changes in C-3 District land use and employment forecast to occur between 1984 and 2000 	<ul style="list-style-type: none"> - 1984 base year - Changes in greater downtown land use and employment determined by buildout of March 10, 1984 List of Cumulative Office Development in downtown San Francisco. (Although no date is attached to this build-out, it could occur between 1990 and 2000)
Land Use	<ul style="list-style-type: none"> - 1984 base year includes all land uses - Incorporates changes over time in office, retail, hotel, industrial, and all other C-3 District space - Reflects changes in response to market demands for space within context of C-3 District planning policies - Incorporates new construction, demolitions, and conversions for all land uses - Incorporates more intensive use of space (both existing and new) over time (e.g. employment density for management/technical office is 276 gross sq. ft. of occupied space per employee in 1984 and 267 gross sq. ft. per employee in 2000) 	<ul style="list-style-type: none"> - 1984 base year includes all land uses - Incorporates net additions of office and retail space in greater downtown area as shown on the List - Reflects changes as a result of development of projects on the List - Incorporates new construction and demolition of office and retail space and conversions to office and retail uses as included on the List - Intensity of use of spaces does not change over time (e.g., employment density for management/technical office is always 276 gross sq. ft. of occupied space per employee)
Employment	<ul style="list-style-type: none"> - 1984 base includes all C-3 District employment - Changes over time incorporate increases and decreases in all types of permanent employment directly associated with a land use, in building maintenance/security employment, and in construction employment 	<ul style="list-style-type: none"> - 1984 base includes all employment in the greater downtown area - Changes over time incorporate the growth of office and retail employment as a result of development of the projects on the List
Residence Patterns and Housing	<ul style="list-style-type: none"> - Residence patterns change over time reflecting changing regional labor force, housing market, employment and transportation factors (e.g., the percentage of C-3 District management/technical office workers living in San Francisco is currently 49% and would decline to 44% in 2000) 	<ul style="list-style-type: none"> - No change in residence patterns from current conditions (e.g. the current 49% of C-3 District management/technical office workers living in San Francisco is assumed to continue to apply)
Transportation	<ul style="list-style-type: none"> - Trip generation has been adjusted to account for travel between buildings such as between office and retail uses) which does not leave the downtown - Modal split changes over time reflecting capacity improvements, changing residence patterns, and behavior adaptations - Includes growth of local and regional non-C-3 District travel 	<ul style="list-style-type: none"> - No adjustment made to trip generation; all trips for buildings on the List counted as new travel in or out of downtown - No changes from current modal splits are assumed - Local and regional non-C-3 District travel assumed to remain constant at 1984 levels, except for addition of travel due to development of the projects on the List
Key Reference	<ul style="list-style-type: none"> - Downtown Plan Draft EIR, EE 81.3, March 16, 1984 	<ul style="list-style-type: none"> - Guidelines for Environmental Impact Review; Transportation Impacts, September 1983

SOURCE: Recht Hausrath & Associates .

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The following text is added to Chapter I., Summary, p. 2 of the EIR, before the paragraph headed "Land Use and Zoning:"

"The cumulative impact analyses in this EIR use two different approaches for estimating future transportation, housing, air quality and energy use conditions:

"- the Downtown Plan forecasts to the year 2000, and

"- the March 10, 1984 list of projects in the greater downtown area.

"There are several differences between the two approaches. The basic difference is that the Downtown Plan approach accounts for future changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach uses known projects of certain types to represent future activity and assumes unchanging characteristics and behavior. As a result of this basic difference in approach, the Downtown Plan forecasts incorporate changes over time in employment densities, residence patterns, and travel patterns, whereas the list-based approach applies current conditions to all future activity. These two approaches are alternative means of assessing the future cumulative context for downtown development."

TRANSPORTATION, CIRCULATION AND PARKING

TRAFFIC

Construction Effects

COMMENT

"Construction, construction-related traffic. It talks about what would happen on Montgomery and Sacramento St., and it may be a mixed blessing when you say that because of varying construction schedules, you'll lessen the impact. I interpret that to mean that basically we're going to have to endure traffic tie-ups and lane closing for a longer period of time because you'd be spreading construction over that long period. Somewhere in the EIR, maybe that should be given some treatment.

"A positive aspect of it is that it states in the EIR in the mitigation that the project sponsor will work with the other projects that are under construction now to make sure that somehow this whole traffic mess can be coordinated. I am particularly worried about 456 Montgomery and 505 Montgomery being under construction at the same time. Because what will happen is that the left lane, if you are going south on Montgomery, the left lane of Montgomery will be closed because of 456 Montgomery construction. And the right lane of 505 Montgomery will be sealed off because of that construction. In other words, people would have to negotiate two lanes of traffic, would have to negotiate this sort of a zigzag pattern.

"Along with that, it says that trucks would be leaving the project site, but at -- Clay St. entering the Embarcadero Freeway. In order to do that, the trucks would have to turn up Sacramento St. or Commercial, if that's possible, to get to Kearny to make that full circle because of all the one-way streets. This is going to be a problem. And I think Kearny St. traffic is something that needs to be addressed in the EIR." (Alton Chin)

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RESPONSE

The EIR describes transportation impacts of cumulative construction activities on p. 91: "Concurrent construction activities at the project site and at nearby sites would disrupt traffic and pedestrian flows by causing multiple lane closures."

According to the architects for the 456 Montgomery St. project, there will be no lane closures of Montgomery St. during any phase of that construction; a lane closure will occur on Sacramento St./1/ That project is expected to be complete in late 1985. (Construction of 505 Montgomery St. is expected to take 19 months and begin in late 1984.)

Concurrent lane closure on the north side of Sacramento St. (west of Montgomery St.) for the 505 Montgomery St. project, and on the south side of Sacramento St. (east of Montgomery St.) for the 456 Montgomery St. project would decrease the lane capacity of Sacramento St. in each block by about 33%, as noted on p. 91 of the EIR.

Page 91 of the EIR states that "the impact of construction truck traffic would be a slight lessening of the capacities of access streets and haul routes because of the slower movements and larger turning radii of trucks." This would apply to Kearny St., since it would be a haul route. The impact of truck traffic would be temporary and would vary throughout the construction period. Mitigation measures to reduce the effects of construction truck traffic are identified in the last paragraph on p. 138 of the EIR, and would include limiting construction truck movement to "between 9:00 a.m. and 4:00 p.m. to minimize peak-hour traffic conflicts," and coordinating with City departments "to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects."

Traffic Effects on Chinatown Streets

COMMENTS

"I really think that -- and I am talking about a lot of different subjects, and some of it might not be related specifically to what the Chinatown

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Neighborhood Improvement Resource Center -- maybe you don't care. But the reason that I dwell on these is because it's so close to Chinatown, because all the traffic problems that are on Washington and on Montgomery, on Clay and Sacramento, they all have a ripple effect on Chinatown. A lot of people who come into Chinatown on the Embarcadero Freeway come off Washington St., go up Washington, turn left on Montgomery St. and meet a gridlock on Washington and Montgomery and Clay. And all of that also affects traffic on Sacramento St.

"You can look uphill from Montgomery St. and see the whole line of cars. And I think that that is a really great concern to a lot of people in Chinatown, and it's a great irritation." (Alton Chin)

"-Pg. 101 - Tables; The intersection analysis does not include Washington/Montgomery/Columbus. The project is in close proximity to two new office projects, Bank of Canton and Washington/Montgomery, which together are putting enormous strain on an already congested intersection, and the project will most definitely add to the problem. Therefore, we feel that the document should consider the W/M/C intersection." (Bruce Marshall)

RESPONSE

The intersection analysis in the EIR does not include the Washington / Montgomery / Columbus intersection because the project would not affect that intersection during the p.m. peak hour. Because of the one-way street pattern in the site vicinity, including Montgomery St. one-way southbound, Kearny St. one-way northbound, and Washington St. one-way westbound, outbound p.m. peak-hour project traffic would be unlikely to enter that intersection. Cumulatively, other projects would add traffic to increase the volume/capacity ratio of that intersection.

The revised transportation analysis, presented on pp. 23-27 of the DEIR Supplement (EIR, pp. 100-102), does not incorporate analysis of the intersections in the site vicinity which were previously analyzed in the DEIR. Within the context of traffic projections for the year 2000, the amount of traffic added to nearby intersections from the project would not be statistically detectable from the total year 2000 intersection

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traffic. The Supplement, p. 26 (EIR, p. 101, paragraph 4), states: "Impacts from the project on other streets [other than freeway feeder streets] would be less, because project traffic on them would be more dispersed. Routes of drivers going to garages were assumed to be sufficiently dispersed so that they would have no measurable effect on traffic volumes on the streets adjacent to the project. Project impacts at the intersections closest to the project site would result primarily from service-vehicle and pedestrian traffic and from traffic using the proposed 23 on-site parking spaces. The traffic volumes from the project would not be detectable against the background of future traffic growth from development in the downtown at the intersections adjacent to the project."

Removal of the Embarcadero Freeway

COMMENT

"It should be noted that the I-280 Transfer Concept Program study includes alternatives which would remove the Embarcadero freeway, including the Washington/Clay Street ramps. The traffic movements in the vicinity of the proposed project would be significantly affected depending on the alternative selected." (Mara Melandry)

RESPONSE

The EIR transportation analysis assumes that a portion of project-related traffic would use the Embarcadero Freeway access ramps at Broadway and at Clay and Washington Sts. If the Embarcadero Freeway were removed, project-related traffic would use remaining access ramps to the Central Freeway that serve the Financial District, such as Fourth and Bryant or Fremont and Harrison. Removal of the Embarcadero Freeway would cause a redistribution of existing traffic that could be expected to increase traffic congestion at numerous locations in the Downtown area. Any attempt to assess project-related and cumulative impacts without first assessing the overall impacts of Embarcadero Freeway removal would not provide meaningful conclusions. The study referred to in the comment, and the EIR/EIS on the removal, which are in preparation, are to provide this information when completed.

TRANSIT

Effect of Project Truck Traffic on Muni

COMMENT

"The diagram shown in Figure 3 (p. 18), depicts the loading/service area on Sacramento Street, with two loading spaces and a 36 ft. wide curb cut. The analysis of the design of the loading/service area (p. 107) notes that trucks will have to back into the loading area from Sacramento Street, as there would not be enough room on-site for the trucks to turn around.

"The loading/service area is located in very close proximity to the outbound bus stop on the 1-CALIFORNIA line. This will at times create situations in which transit will be delayed by activities at the loading/service area. Trucks backing into the loading/service area will at times block traffic flow and may significantly delay transit vehicles. Adding to such problems on this already congested street is not acceptable.

"I would recommend that Alternative Three be given further consideration. Under this alternative, the project would not contain parking spaces, so that additional capacity for loading spaces could be provided. This alternative might help to provide some mitigation for the impacts of the loading/service area.

"Alternatively, I would suggest as a possible mitigation measure, that Commercial Street be considered as a possible location for the loading/service area and its access." (Debra King)

RESPONSE

The following sentence is added at the end of the first paragraph on p. 107 of the EIR:

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"Trucks backing from Sacramento St. into the project loading area could delay movement of trolley buses of the 1-California line operating westbound on Sacramento St., and using the bus stop on the project frontage east of the proposed loading area driveway."

The mitigation measure on p. 140 of the EIR, discussing provision of loading spaces in compliance with City Planning Commission Resolution No. 9286, is revised to read as follows. New or revised language is underscored:

"The loading area for the project could be redesigned to provide three off-street loading spaces, each 35 ft. in length, in compliance with City Planning Commission Resolution No. 9286 to mitigate project demand based on the Center City Pedestrian Circulation and Goods Movement Study formula. This measure could also include provision of on-site turning room, so that vehicles using the loading spaces would not be required to back in from Sacramento St. and conflict with movement of trolley buses of the 1-California line operating westbound on Sacramento St.

"The sponsor has rejected this measure because the proposed project loading spaces would meet Planning Code requirements, because provision of three loading spaces would reduce project frontage on Sacramento St. proposed for retail use, and because provision of on-site turning room would require about 3,500 to 4,000 sq. ft. of ground floor space, in addition to about 1,300 sq. ft. of loading space already proposed. This would reduce ground-floor retail space in the new building to about 5,900 to 6,400 sq. ft., compared to 9,900 sq. ft. in the proposed project.

"The project could provide project loading access from Commercial St., to avoid truck movement conflicts with Muni vehicles on Sacramento St., or could provide a loading entrance on Commercial St. and exit on Sacramento St. The sponsor has rejected this measure because provision of off-street loading with access from Commercial St. would reduce project retail frontage on Commercial St. and would not be consistent with sponsor goals to enhance Commercial St. as a pedestrian-oriented street with retail uses. The narrower width of Commercial St., compared to Sacramento St.,

would reduce truck maneuverability and increase potential truck movement conflicts with pedestrians, and with other vehicles on this street. (Turning room on Commercial St. would be further limited by the widened sidewalk under construction in front of the Old Sub-Treasury Building, as part of the Bank of Canton project, directly north of the project frontage.)

"The City Planning Commission could require this measure as a condition of project approval."

PEDESTRIANS

Pedestrian Conditions on Montgomery St.

COMMENT

"The section on pedestrian crowding. I just recently was down on Montgomery, not quite as far north as this. I found myself going outside into the bus zone about three times in one block because I was in a hurry at the noon hour to get to a luncheon." (Commissioner Bierman)

RESPONSE

Page 38 of the EIR states that, five blocks south of the project (near Market St.), the Montgomery St. sidewalk operates in "constrained" to "crowded" conditions. These conditions, described in Table D-2, p. A-41, are worse than the "impeded" condition that exists at the project site, and could cause a pedestrian to step off the sidewalk and into the bus zone, as Commissioner Bierman has described. Figure D-2, p. A-51 of the EIR, shows and notes that some pedestrian overflow into the vehicular roadway can occur with "crowded" conditions.

Pedestrian Flow Definitions

COMMENT

"In the crowding of the sidewalks, I would just again say that, I don't know, but when you say impeded, there seems to be three levels: very impeded, sort of impeded, and not so impeded. The impeding that is going on seems to all be at the highest range. But that only is clear when you read the appendix. The appendix figures on the pedestrian [flows] are really very, very heavy, I think. So I think that ought to be in the main body of the paragraph, in the data dealing with pedestrians, the main body of the EIR." (Commissioner Bierman)

RESPONSE

The pedestrian flow regimen comprises a range of seven conditions from "open" to "jammed," as described and illustrated in the EIR in Table D-2, p. A-39, and Figure D-2, pp. A-51 - A-52. The first five conditions in this range, "open" to "crowded," fall within the defined limit for desirable flow, 14 pedestrians/foot/minute (p/f/m). The other two conditions, "congested" and "jammed," are defined as undesirable. The "impeded" condition is in the center of the range of the five desirable conditions.

At the lower end of impeded flow (about 2 p/f/m), couples as well as individuals have a choice of speed and direction, which is frequently affected by indirect interaction with others. At the midpoint of impeded flow (about 4 p/f/m), the choice of speed and direction is constantly affected by indirect interaction with others. At the upper end of impeded flow (about 6 p/f/m), a choice of speed is still available, and crossing and passing movements are possible but with occasional interference and physical conflict.

Of the seven impeded conditions shown in Table 7, p. 22 of the DEIR Supplement (EIR, p. 99) or existing plus cumulative plus project development, four are in the lower half of the range (i.e., less than 4 p/f/m), and three are in the upper half of the range. (There also is one "constrained" flow condition shown.)

The last sentence of the first paragraph on p. 21 of the DEIR Supplement (EIR, p. 98d) concludes: ". . . although conditions as high as 18 p/f/m, a congested condition, are possible with some conflicts among pedestrians." The following sentence is added to the end of that paragraph of the EIR Supplement: "The 'impeded' condition is in the center of the range of the five desirable conditions (which range from 'open' to 'crowded')."

PARKING

Savoy Garage Parking

COMMENT

"Page 103 has a discussion about the Savoy Garage. It's in the discussion of parking. It says that although the Savoy Garage will be removed, there will be a hundred spaces replaced. I think that that paragraph should include the fact that a large building is going on top of those hundred spaces so they will be open to the public but they will not add to the public's use of spaces because they will be using them themselves, essentially."

(Commissioner Bierman)

RESPONSE

The updated cumulative parking analysis on pp. 27-29 of the DEIR Supplement (pp. 103-104 of the EIR) is based primarily on the Downtown Plan Draft EIR employment-forecast methodology, and also discusses the development-list-based approach (EIR, p. 104). The Savoy Garage site discussion is deleted per the Supplement. However, the parking demand that would be created by the 71,000 sq. ft. office-retail project under construction on the Savoy Garage site was included in the cumulative

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parking discussion in the third and fourth paragraphs on p. 103 of the DEIR. The stated deficit of 14,800 parking spaces (p. 104 of the DEIR) took future supply and demand into account. The cumulative parking discussion on p. 103-104 of the EIR also takes into account parking that would be lost or gained on sites to be developed.

CUMULATIVE TRANSPORTATION

COMMENTS

"And those cumulative problems come through in the [Growth Management Alternatives For Downtown San Francisco - Downtown EIR Consultant's Report, May 1983]. It isn't in the EIR. They come out, to a small amount, in the Downtown Plan. You have those documents. They're your documents. And yet this document is written as though you don't have that information. And yet when you read these documents, you find out that gridlock is going to occur; the Muni is going to have troubles. And you're just packing, packing, packing people in. So you won't be reaching the point of real mitigation until you start addressing the cumulative impacts in these mitigations, because no one is -- is no one ever going to have to address that? It's not going to come up on any one of these projects? You are never going to have to address Stockton St. on any of these projects unless it comes down to some poor little project, a commercial or housing project in Chinatown, and then you stick it with them and they bear the brunt of it, not all of these projects that really generate the traffic." (Sue Hestor)

"The traffic generated by the proposed development will add to the already heavy congestion occurring during peak hours on freeways in and out of San Francisco." (Mara Melandry)

RESPONSE

The Supplement to the Draft Environmental Impact Report for 505 Montgomery Street, April 27, 1983, includes a revised discussion of cumulative effects of downtown development, including transportation effects. The

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Supplement material replaces the cumulative analysis in the 505 Montgomery Street DEIR. Pages 6-31 of the Supplement update the development-list-based cumulative analysis for downtown projects under formal review, approved, or under construction as of March 10, 1984. The Supplement also discusses, and compares to the development-list method, an employment-forecast approach to cumulative analysis, based on the Downtown Plan Draft EIR, published March 16, 1984. (The Downtown Plan Draft EIR incorporates work published in Growth Management Alternatives for Downtown San Francisco - Downtown EIR Consultant's Report, cited by the commenter.) Cumulative transit effects are discussed on pp. 14-20 of the Supplement (pp. 94f-98c of the EIR); cumulative pedestrian effects on pp. 20-23 (pp. 98c-100 of the EIR); cumulative traffic on pp. 23-27 (pp. 100a-102 of the EIR); and cumulative parking on pp. 27-29 (pp. 103-104 of the EIR).

The intersections of Washington / Battery Sts. and Clay / Front Sts. are analyzed in the EIR (see discussion on pp. 101-102, including Table 8, p. 102, of the EIR) as they control the flow of traffic onto and off major freeways serving the project vicinity. Table 8, p. 102 of the EIR shows project and cumulative effects on the level of service of these intersections, indicating that peak-hour Levels of Service, with cumulative development, would worsen from B to C at Battery / Washington, and from C to D at Battery / Clay.

Cumulative Analysis Methodology

COMMENTS

"METHODOLOGY FOR DETERMINING CUMULATIVE IMPACTS - MODEL VERIFICATION

"The accuracy of a model for determining future conditions is determined by the validity of the assumptions used in the model, the quality of data use for input to the model, and the ability to verify the model. To verify the validity of a model it is necessary to input historical information to see if it accurately predicts the present situation. For instance, if a model is used to project the demand for office space in 1990 based on 1984 data, one way to test the validity of the model is to see if it accurately predicts the present 1984 demand for office space using 1978 data.

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"Modeling is a very powerful tool, but it presents opportunities for error, misunderstanding, and abuse because the public and decision makers cannot independently verify if they are accurate.

"The California Environmental Quality Act requires information in an EIR to be accurate, adequate, objective, and understandable so that the public and decision makers can make intelligent decisions. If the basis for the environmental impacts from cumulative office development rests primarily on a model simulating future conditions then the assumptions for the model and the reasons why the public should believe the model is valid must be explained in understandable terms.

"The basis for the environmental analysis of cumulative office development in this EIR is based on models. The magnitude of employment, transit, traffic, housing, and other impacts are determined as a result of these models.

"The EIR should:

- "- Describe in understandable terms the major components of the model for predicting future office demand and employment in 1990 and 2000 (are they price of land, regional factors, housing costs, national economy, foreign trade?).
- "- Subjectively describe the relationship between and relative weights given to the major components of the model.
- "- Identify the type and sources of the 1981 data used as input to predict conditions in 1990 and 2000.
- "- Use the same type and source of data from 1975 to 'predict' the demand for office space and employment in 1984. The ability of the model to accurately predict from 1975 data the conditions in 1984 should give an indication of its accuracy and validity.
- "- Describe whether if the model was or was not successful in predicting 1984 conditions based on 1975 data."

"Referring to the Supplement (page 2): Please summarize and quantify the 'area-wide housing availability, planned transit system improvements, the effect of congestion on mode selection decisions, and other factors'

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Neither this Summary nor the [Downtown Plan Draft EIR] DPDEIR provide a concise, quantitative summary of these models and/or numbers, making comment on their validity virtually impossible." (Carl Imparato)

"Referring to page 8 [of the Supplement]: The [Downtown Plan Draft] EIR purports to model cumulative transportation impacts. As our comments on that document will indicate, we believe that it severely underestimates those impacts by using, among other things, excessively low growth forecasts. Please incorporate those comments and adjust the impacts in the Supplement accordingly." (Carl Imparato)

RESPONSE

The "model" discussed in the comment does not exist per se. Rather, the process discussed in the comment is the product of two separate analytical methodologies. The land use, housing and employment projections have been made without the use of modelling techniques (as described below). The transportation analysis has employed modelling techniques to project future travel. The transportation analysis is linked to the land use, housing, and employment analyses only to the extent that employment projections and projected residence patterns of C-3 District employees are used as data in the transportation analysis.

As described on pp. 93-94b of the EIR (Supplement, pp. 8-10), the transportation model consists of three major components. Figure J.1, Appendix J of the Downtown Plan Draft EIR illustrates the relationship of the three components and cites the sources of all data used in the transportation model. As discussed on p. 94b of the EIR, the transportation model was calibrated using 1981/82 transportation data. The validation process for the model involved testing the accuracy of the model's results against actual field measurements of transportation conditions. Because of the type of model used, the only validation of the model necessary was to show that the model could accurately reproduce a set of measured conditions starting from a synthetic data base (i.e., an estimate of C-3 District employment). Thus, testing the model with 1975 data would not produce relevant results, especially since the necessary transportation data for the 1975 conditions do not exist.

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As to whether or not the model has been successful in predicting 1984 transportation conditions, sufficient time has not yet elapsed to determine the 1984 conditions at the half-year point. With regard to general trends, the model has predicted slightly more transit use and slightly less auto use at the regional gateways (screenlines) to the North Bay and the East Bay than has been shown to be the case so far in 1984. However, the data vary by corridor and five corridors (four for San Francisco and the Peninsula) do not yet have data relevant for comparison.

The cumulative analyses for forecasting future land use, employment, and residence patterns are described in the Downtown Plan Draft EIR. Appendix sections describe the methodology, identify the factors considered, and identify the types and sources of data used (pp. H.1-H.19, G.1-G.30, and I.8-I.33). A concise description of the major components of the process of developing employment and land use development forecasts is presented in the flow charts in Figure H.1 (p. H.10 and repeated on p. G.13) and Figure G.1 (p. G.14). The factors considered in forecasting residence patterns are identified in the diagram in Figure I.1, p. I.10.

The Downtown Plan Draft EIR approach for forecasting future land use, employment, and residence patterns is based on a conceptual framework of the process of urban economic development. The analytical procedures incorporate a variety of types and sources of data and information concerning past, current, and likely future conditions regarding economic, real estate, demographic, and public policy factors. The forecasting process does not involve a set of calculations or equations which could be computerized and used to predict future conditions for a future year based on the input of data for a prior year, as is suggested by the comment.

The type of modelling that the comment describes would be more appropriate for economic forecasts done for specific industries for large geographic areas. For these types of forecasts, there would be a much better data base as well as much less concern about the location of facilities and the effect of local policies on location options. For the Downtown Plan Draft

EIR, the forecasting effort focused on an area for which very little published data are available. Further, the forecasts had to be developed to be sensitive to the effects of site-specific local land use policies which had not yet been enforced or reflected in recent development and employment patterns and statistics.

The same conceptual framework and analytical methodology could be used to forecast current conditions based on information available at an earlier time. However, it would not be a process of simply "inputting" data for a particular year and getting forecasts as the "output." The Downtown Plan Draft EIR forecasting approach has not been employed to replicate current conditions based on all of the relevant types of information that would have been available at an earlier time. This is not needed for purposes of evaluating the validity of the Downtown Plan Draft EIR forecasts.

The descriptions of the methodology and the forecasts in the Downtown Plan Draft EIR provide readers with background and information upon which to make their own evaluations of the approach and its forecasts. In addition, the comparison of the alternatives provides five different forecasts and highlights the "sensitivity" of the numbers to different assumptions about local land use policy. Further, the DEIR Supplement summarizes cumulative impacts using a list-based approach which provides another basis for comparison and evaluation of the results of Downtown Plan Draft EIR forecasts.

Comparison of List-Based and Employment-Forecast-Based Cumulative Transportation Analysis

COMMENT

"Regarding the transportation analysis in general: Please show, in one table, for 1,000 gsf of new office space, and for the list-based analysis and the [Downtown Plan Draft] EIR-based analysis, the:

- total number of office workers
- total numbers of work and non-work pte's

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- work and non-work pte's allocated to each region
- work and non-work pte's allocated to each transit system
- total numbers of autos generated and vte's allocated to each corridor and region (work and non-work)
- vehicle occupancies for each region
- parking space demand (long-term and short-term).

"Please show these data for peak hour, two-hour peak period, and the new 'extended' peak period associated with your assumption of capacity-constrained corridors.

"Please show these data for 1984 and for 2000 conditions. Please show these same data for the analyses used in 1980-81 vintage DCP EIRs and discuss the reasons for any changes.

"The data requested above is essential to a comparison of the two methodologies presented in the Supplement and essential to permit intelligent public comment on the document." (Carl Imparato)

RESPONSE

For the list-based analysis, all of the requested data are available from the Guidelines for Environmental Impact Review; Transportation Impacts (Department of City Planning, September 1983). For the analysis based on the Downtown Plan Draft EIR, such data (i.e., per 1,000 sq. ft. of new office space) would be meaningless because that analysis predicts travel for more than office and retail space. Total employment projections (not based on employee per sq. ft. ratios) for all land uses in the C-3 District are the basis of the transportation analysis. Additionally, the analysis based on the Downtown Plan Draft EIR projects increases in travel from areas outside of the C-3 District and outside of the City. Thus, to compare the travel results on the basis of new office space alone would be misleading. The introduction to the cumulative impacts discussion (pp. 213-215 of this chapter) notes that the results of the two analyses are not directly comparable. One reason is, as stated on p. 94c of the EIR, that the list-based method makes projections of travel on the basis

of two components of future land use growth, while the analysis based on the Downtown Plan Draft EIR uses a much-broader-based spectrum of land use.

Comparison of Project with Downtown Plan and With Other Downtown Plan Draft EIR Alternatives

COMMENT

"Throughout the Supplement (and particularly in the Tables on pages 15, 22, 25 and 27), all comparisons should be made, not to the Downtown Plan, which is at this time simply a proposal, but to Alternative 1 of the [Downtown Plan Draft] EIR, which purports to examine the zoning in effect today.

"Referring to the last paragraph on page 28 [of the Supplement]: As discussed in [the] comment . . . above, the parking deficit should be that associated with Alternative 1 in the [Downtown Plan Draft EIR], not the Downtown 'Plan.'
(Carl Imparato)

RESPONSE

As stated on p. 94c of the EIR and reiterated on pp. 98b, 100, 102 and 104 (Supplement, pp. 11, 19, 23, 27 and 29), similar conditions would be expected for each of the Alternatives, and, while there is a range of values that exists among the Alternatives and the Downtown Plan, the range is within the level of accuracy of the analysis. Thus, the results of the analysis of the Downtown Plan, especially in terms of Level of Service, are statistically equivalent to the results from Alternative 1.

The headings in Tables 6, 7, 7a and 8 that read "Downtown Plan (2000)" are changed to read "2000".

Present and Future Modal Splits

COMMENTS

"Page 6 [of the Supplement (p. 92 of the EIR)] states that the 'modal assignments have been made on the basis of future modal splits for the year 2000 contained in the Draft EIR for the Downtown Plan.' The travel demand generated by 505 Montgomery (Table 5) should not be based on assumed year 2000 modal splits, but on modal splits for the year of project completion. How do they differ from 1984 modal splits? Please document precisely and show any calculations, models and assumptions associated with any changes in the splits and the travel demands. Are the DPDEIR-based splits those for Alternative 1, the existing zoning? As we requested above, all [Downtown Plan Draft] EIR-related data should assume existing zoning, not a fanciful 'plan' which has as much relevance to real conditions as does Houston's zoning plans."
(Carl Imperato)

"What are the 'modal splits predicted for the year 2000 by the DPDEIR'? What are the present modal splits?" (Carl Imperato)

RESPONSE

The year 2000 has been used for the analysis of cumulative impacts because that year represents a planning horizon beyond which land use and employment growth cannot be predicted with any certainty. Thus, within the year 2000 horizon, comprehensive projections of travel demand on San Francisco's transportation network include travel from known and forecast growth in employment and travel in the downtown and the region. To analyze the 505 Montgomery Street project for the time of completion it would be necessary to ignore all of the cumulative development that would take place following completion of the project. By use of the year 2000, existing and proposed development has a higher certainty of being in place and is thus analyzed in a more realistic context.

As discussed in the Consultant's Report on Growth Management Alternatives for Downtown San Francisco, the analysis of the five Alternatives (and the Downtown Plan) for the year 2000 has used only one set of modal splits for

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the year 2000. The modal split used for the 505 Montgomery Street project travel in the DEIR Supplement is the same year 2000 modal split.

The 1984 and 2000 modal splits for C-3 District employees are shown in Table J.5, Appendix J of the Downtown Plan Draft EIR.

Modal Shift From Auto to Transit

COMMENT

"WHAT IS THE BASIS FOR THE ASSUMPTION THAT TRANSIT USE WILL INCREASE AND AUTOMOBILE USE WILL DECREASE?

"Have the [Downtown Plan Draft] EIR assumptions about automobile use and transit use been validated by comparison of actual 1981/82 and 1984 information? What has been the increase or decrease of automobile usage on the Bay Bridge and Golden Gate Bridge between 1981/82 and 1984? What has been the increase or decrease in Golden Gate Transit and AC Transit use?

"The model for transportation predicts more transit use and less automobile use (in terms of the percent of commuters using each mode) between 1981/82 and 1984). Recent information (May, [1984] article in the San Francisco Examiner) from transportation agencies shows the measured 1984 data indicates the exact opposite has happened, automobile use is up and transit use is down. Given this information, the EIR should explain the basis for its model and indicate why it should be used to project 1990 and 2000 conditions. (David Jones)

RESPONSE

As discussed in Appendix J of the Downtown Plan DEIR, there is little difference between the peak-period and peak-hour auto use by commuters in the modal splits for 1981/82 vs. 1984 (see Table J.5, p. J.16 of the Downtown Plan Draft EIR, which shows that 0.6% fewer peak-hour and 0.2% fewer peak-period commuters would use autos in 1984 than in 1981/82). Considering that the Downtown Plan Draft EIR forecasts an increase in C-3 District employment for the period 1981/82 to 1984, the relatively

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unchanged modal split means that the Downtown Plan Draft EIR method forecasts an increase in auto commuting between 1981/82 and 1984 in terms of vehicles at the regional screenlines.

The assumptions of continuing shift from auto to transit and ridesharing, most apparent in the 1990 and 2000 modal splits, are made on the basis of long-term trends in transit use in the San Francisco commute corridors. Census data show that in the period 1970 to 1980, transit use for commuting increased. Similarly, Bay Bridge data show that ridesharing has been increasing over the last seven years. Thus, this shift is well-established in San Francisco commute corridors. As noted in the response (pp. 229-231 of this chapter) to the comment regarding model verification, insufficient time has elapsed to allow a quantitative comparison of predicted and actual travel characteristics.

Non C-3 District Transit Use

COMMENTS

"NON-C-3 DISTRICT LOADINGS ON THE C-3 DISTRICT TRANSIT SYSTEM SHOULD BE QUANTIFIED

"The [Downtown Plan Draft] EIR should indicate how many million square feet of additional commercial office and retail space was assumed to occur between 1981 and 1984, 1990, and 2000 in non-C-3 areas which would use the same transit system as that used by the C-3 District. How much development was assumed for the Van Ness Corridor, the Redevelopment Area, the Mission Bay area, and the South of Market area currently zoned M-1? Was any transit demand for the proposed new San Francisco sports stadium in the China Basin area assumed?

"'Historic trends' were used as a basis for projecting the amount of non-C-3 District development. What was the period used for determining these historic trends. The period used should be very recent to reflect the recent explosion in the amount of development occurring on the preiphery of the C-3 District.

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"What assumptions were made about the demands of other counties on AC Transit, BART, Golden Gate Transit, and SamTrans? Was it assumed that their additional capacity is dedicated to serve San Francisco demand?" (David Jones)

"Regarding the Cumulative Travel Demand analysis: As Table 5A (page 12 [of the Supplement]) clearly indicates, the impacts analyzed are those on regional transit agencies and corridors. It is deceptive to understate the impacts on those agencies and corridors by arbitrarily confining the cumulative analysis to the demand generated by projects within the C-3 district alone. Using this ploy, only 13 million out of 19 million gsf are included (for the list-base method), and only half the forecasted San Francisco office growth is included (for the 'forecast' method). Ignoring the enormous transportation impacts due to non-C-3 projects violates both the spirit and the letter of CEQA's mandated cumulative analysis. Please revise all cumulative analyses to incorporate the full impacts of non-C-3 projects." (Carl Imparato)

RESPONSE

In the Downtown Plan Draft EIR, the analysis of non-C-3 District development potential was not as detailed as was the analysis of C-3 District land use and real estate development and employment. For the purposes of the Downtown Plan Draft EIR, current real estate market conditions and citywide patterns of economic activity, as well as likely future trends, were considered in determining how the Downtown Plan might indirectly affect development and employment outside the C-3 District.

The response to the following comment (pp. 238-241) describes the potential future pattern of development in non-C-3 areas in terms of the rate of employment growth between 1981 and 2000. This estimate of development potential is based on consideration of historic development patterns in the City, the existing distribution of land uses, proposed and potential projects including Mission Bay, and economic trends affecting business location decisions. Specific forecasts of the amount (sq. ft.) of future development in such areas as the Van Ness Corridor, Redevelopment areas, Mission Bay, and the South of Market areas currently zoned M-1 were not prepared and were not necessary for the level of real

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estate and employment analysis in the Downtown Plan DEIR. (See Downtown Plan Draft EIR, pp. IV.B.55-60 and IV.C.35-36 for discussion of the development potential in non-C-3 District areas and how this was considered in the forecasts.)

Historic growth rates (factors) have been used to project increases only for non-C-3 District travel at the regional screenlines (referred to on p. 94a of the EIR -- Supplement, p. 9). No other use of historic growth rates has been made in the transportation analysis. Because of the individual and unique nature of each of the transportation screenlines, each growth rate is based on data for that location. Thus, the growth rates for freeways project growth in auto trips, while the growth rates for transit project growth in ridership.

Each of the historic growth rates inherently contains information about regional growth in travel patterns and thus incorporates not only growth from other parts of San Francisco, but from elsewhere in the region. As an example, the historic growth factor for trips southbound on US 101 includes travel that crosses the Bay Bridge or the Golden Gate Bridge as well as travel from San Francisco. However, the growth is projected as growth in auto travel and cannot be directly related to growth in employment in San Francisco.

COMMENTS

"WHAT DOES THE DOWNTOWN PLAN EIR ASSUME AS THE NUMBER OF NON-C-3 EMPLOYEES THAT WILL UTILIZE THE C-3 DISTRICT TRANSIT SYSTEM

"The [Downtown Plan Draft] EIR states that: 'Citywide employment is forecast to increase between 1981 and 2000 under the policies of the Downtown Plan. Just over half of this growth would occur in the C-3 District. The balance is likely to be divided about equally between the areas surrounding the C-3 District (south of China Basin including Mission Bay, Civic Center, Northern Waterfront, and the Washington/Broadway Special Use District) and the rest of the City.' (p. IV.C.47)

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"Since the Downtown Plan EIR indicates that there will be 90,000 new jobs in the C-3 District which will be created in the next 16 years, this statement indicates there will be 45,000 additional jobs immediately adjacent to the C-3 District and 45,000 additional jobs elsewhere in the City over the next 16 years."

"How many of these non-C-3 District employees will use public transit? Were these employees assumed as part of the transit capacity analysis in this EIR and are they included in Table IV.E.2? If not, how many employees were assumed outside the C-3 district for the purposes of the transit analysis."

"The [Downtown Plan Draft] EIR states that 'historic trends' have been applied to non-C-3 travel components and that regional travel growth was used in making projections. What historic trends were assumed (1970-1980?, 1982-1983?) What is the validity of these assumptions given recent trends in housing and employment?"

"Is the rate of new growth anticipated by 1990 and 2000 for the C-3 District less than, equal to, or greater than historic trends in that area?" (David Jones)

"(Page 2 [of the Supplement]): Regarding C-3 vs. non-C-3 District trips: what are the total numbers of each and what impacts do each generate (vte's and pte's, by transit system and transportation corridor)?"

"'The third component is non-C-3 District travel. . .' (page 8 [of the Supplement]). We believe that this component and its impacts are understated, as our comments on the [Downtown Plan Draft] EIR will indicate." (Carl Imparato)

RESPONSE

In the Downtown Plan Draft EIR, analysis of C-3 District employment growth was done within the context of future citywide and regional economic activity. Potential employment growth outside the C-3 District was considered for both areas adjacent to the C-3 District and the rest of the

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City. In each case, past development and employment trends were reviewed and consideration was given to how changes in the distribution of economic activity in the City would affect future growth.

The analysis done for this study indicates that the overall rate of growth in total City employment is likely to be slower in the future than it was in the past. This slowing of overall employment growth is also reflected in the Association of Bay Area Governments' (ABAG) forecast for San Francisco and the Bay Area region. (See the Downtown EIR Consultant's Report, Table H.9, p. H.40 and accompanying text.)

With respect to economic growth in different areas of the City: the future rate of growth in C-3 District employment under the Downtown Plan would represent a slowing of growth in this area. In areas adjacent to the C-3 District, particularly to the south, the future rate of employment growth is expected to be higher than in the past, however. The future rate of growth in the rest of the City probably will represent a rate of growth that is similar to, or somewhat lower than, that which occurred in the past in these areas. (See Downtown Plan DEIR, pp. IV.B.55-60 and IV.C.47-49 for discussion of the factors considered in the citywide perspective on real estate development and employment.)

The travel analysis takes a regional perspective on the use of the transportation systems serving Downtown. As stated in the response to the preceding comment (p. 238 of this chapter), non-C-3 travel growth at the regional screenlines was projected on the basis of historic trends in growth at the regional screenlines. Non-C-3 travel is defined as travel that has neither an origin nor a destination in the C-3 District. Thus, non-C-3 travel includes travel to and from other parts of downtown and trips through San Francisco from other parts of the region. Employment projections are not specifically used in the non-C-3 travel analysis. Because analysis of non-C-3 travel has been conducted for discrete locations (i.e. the regional screenlines) there is no direct relationship between any of the non-C-3 housing and employment analyses described above and the non-C-3 travel analysis.

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With respect to the amount of non-C-3 growth in travel: by assuming that historic trends of growth would continue unchanged into the future, the transportation analysis has potentially overestimated the effect of non-C-3 travel growth in light of the declining City-wide employment growth trend. That is, the transportation analysis has assumed that growth in non-C-3 travel would continue at rates similar to those that currently exist rather than using lower rates that reflect the slowing of overall employment growth in the region (see above).

Peak-Hour Hotel Impacts

COMMENT

"Referring to the second paragraph on page A-2 [of the Supplement (A-29 of the EIR)]: Hotel projects do contribute to peak transit and transportation impacts, even though their peaking characteristics do indeed differ from those of office buildings. Given the large amount of hotel development assumed in the DPDEIR and the over-burdened condition of the Muni, cumulative hotel development impacts on peak hour transit and traffic may indeed be relatively significant and should not be ignored. Please incorporate these impacts or demonstrate why the numbers of pte's generated would be insignificant." (Carl Imperato)

RESPONSE

Cumulative hotel space impacts are discussed in the 135 Main St. Building Final Supplemental EIR, EE 81.61, certified November 30, 1982, pp. 78-80. (This discussion is hereby incorporated by reference in this EIR.) On p. 80 of that EIR, it states that "the effective increase in peak-hour commute direction traffic and transit demand from the cumulative hotel development would be in the range of 2%-4%, depending upon how much guest travel would occur in the peak direction of travel. As the transportation analysis is estimated to be accurate to within ±10%-15%, all of the increases would be within the margin of tolerance for the analysis, i.e., after rounding to two significant figures the increases would not be discernible."

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P.M. Peak Non-Work Travel

COMMENT

"THE ASSUMPTION ON THE DIRECTION OF PEAK P.M. NON-WORK TRAVEL FROM THE C-3 DISTRICT UNDERESTIMATES THE TRAVEL IN THE COMMUTE DIRECTION

"Many of the non-work trips during the peak P.M. period are from the retail areas of the Embarcadero, Market Street, and Union Square areas. It appears to the casual observer that most of these non-work trips are going away from the downtown area in the commute direction, and very few are going in the non-commute direction.

"What is the basis for the Downtown Plan [Draft] EIR that 50% of the P.M. peak hour non-work trips are travelling in a non-commute direction and 50% are travelling in a commute direction?" (David Jones)

RESPONSE

Factors entering into the assumption of the 50% split were the p.m. peak inbound/outbound directional travel splits from published trip generation references for various types of retail and commercial land uses. The trip generation references are listed in Table J.1, Appendix J of the Downtown Plan Draft EIR.

CUMULATIVE TRANSIT IMPACTS

Existing Transit Capacity

COMMENTS

"EXISTING TRANSIT CAPACITY - THE SOURCE OF AND ACCURACY OF 1981/82 BASE CAPACITY DATA FOR TRANSIT SYSTEMS SHOULD BE CITED AND VERIFIED

"An accurate analysis of existing transit use and capacity is essential to

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determining the environmental impact of future development, since the existing conditions are the base from which future projections are made. The accuracy, reliability, and up-to-dateness of the field measurements and count data is a crucial factor in the adequacy of the transit analysis in the EIR.

"Figure 9 of the MUNI 1983-1988 Five Year Plan shows the percentage of vehicles available for service on any given day is extremely variable, and has reached as low as 75% of the projected schedule runs in 1981/82. Therefore, projecting transit capacity based on the assumption that transit agencies are adhering to their schedules extremely underestimates the overcrowding of buses which is actually occurring on the streets.

"In conversations with MUNI and PUC planners SFRG has been told that MUNI has taken no comprehensive and accurate actual citywide measurements of MUNI line-by-line ridership to the Downtown C-3 district (based on actual counts) in recent years.

"The [Downtown Plan Draft] EIR should indicate whether MUNI and other transit agency capacity was based on projections assuming that the transit agencies were running the number of vehicles scheduled, or was it based on actual line-by-line counts of passengers on vehicles?

"Was the 1981/82 MUNI capacity information based on accurate actual measurements of MUNI line-by-line ridership to the Downtown C-3 District (based on actual counts)?

"What actual transit counts were done to verify the 1981/82 transit information? Were any actual MUNI counts done in 1984? If none were taken, what is the most recent accurate MUNI information containing actual counts of ridership for the MUNI lines serving the C-3 District?

"The [Downtown Plan Draft] EIR should indicate the source of the 1981/82 transit ridership data that was used as the basis for the Downtown Plan EIR, both for the MUNI and for other transit systems? Has the MUNI verified this information is accurate?

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"Does the MUNI concur that only 12% of the person trip ends (pte) generated by the downtown C-3 District on an average weekday occurs in the two hour evening peak P.M. period? What is the basis for this information?

"Are only transit vehicles going in the peak direction during peak a.m. and p.m. periods counted when determining transit capacity?" (David Jones)

"Are transit capacities and service levels based on scheduled runs or actual numbers of runs provided? (The latter should be used.)" (Carl Imperato)

RESPONSE

The 1981/82 transit ridership and loading data used in the Downtown Plan Draft EIR analysis are summations of actual counts of individual transit lines for that period in time. Calculations are made on the basis of observed operating conditions, as opposed to scheduled operations. Muni supplied the data for the Downtown Plan Draft EIR analysis from its ongoing program of ridership checks. (The data supplied and collected for each transit agency are in the supporting documentation for the Downtown Plan Draft EIR on file with the Office of Environmental Review, 450 McAllister St., San Francisco, CA.) Muni was involved in the process of verifying the transportation analysis for the Downtown Plan Draft EIR and as a result of that process, approved of the use of Muni data and the projections derived from that data.

The future capacities were developed by applying percentage increases expected in the future to observed existing capacity. Thus, to the extent that the existing conditions contain inherent capacity reduction for missed runs, the future capacity projections have taken into account the inability of the transit systems to provide 100% of scheduled capacity. As noted on p. 98 (Supplement, p. 17) of the EIR, the Muni analysis calculates capacity on the basis of all runs leaving the C-3 District in the p.m. peak, even though some of the routes pass through the C-3 District. For all of the transit analyses, only peak-direction vehicles are counted. The trip generation data used for the project in the DEIR Supplement are from the September 1983 Transportation Guidelines, which have been approved by Muni.

Muni Loading Conditions

COMMENT

"Page 96, the table certainly shows that E and F conditions on the lines, on the transit lines, are going to happen. The trouble with the new way -- I mean, I guess it's an improvement because it does show that we're headed into really uncomfortable conditions. But going by corridor, the north, south, east and west corridors, still doesn't give the picture of what individual lines will really be. I still think the EIR is incomplete if it doesn't have a table of the individual lines and their crowding now. If we can't put projections on them, we at least ought to have the data. Because that data is worse. This business of averaging a whole corridor doesn't really show how bad the N Line, how bad the 38 Line will be. Those are the lines people are going to take. The little 37 and 43, those are not the ones that are going to be so crowded.

"So I still think our new way and then the new, improved way are not showing some of the discomfort people are going to be in." (Commissioner Bierman)

RESPONSE

The EIR uses the corridor-based analysis because it is not possible to predict accurately which individual transit lines future riders would use, only which corridor they would use. Additionally, it can be assumed that if a rider desired to take one line that was operating at or above capacity, he/she might switch to another line, within the same corridor, that was operating below capacity. Therefore, the corridor-based analysis might give a more accurate prediction of overall Muni operations than would a line-by-line analysis. As described on pp. 98-98a of the EIR (Supplement, pp. 17-18), aggregation of line-by-line data may slightly distort overall ridership conditions. (The following response provides additional discussion regarding line-by-line loadings.)

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COMMENT

"1984 OVERCROWDING ON MUNI IS VASTLY UNDERSTATED

"The [Downtown Plan Draft] EIR, however, states that the actual levels of transit service are better than what is indicated [in Table IV.E.2, p. IV.E.29]. It states that 'because Metro vehicles can accommodate higher loadings (2.0 passengers per seat) than buses or trolleys (1.5 passengers per seat) the level of service would be somewhat better than shown in Table IV.E.2.' (emphasis added)

"The Downtown Plan [Draft] EIR also states that, 'peak hour Metro operations in 1981/82 were Level of Service D (1.63 passengers per seat).' (p. IV.E.8).

"The MUNI peak p.m. period loadings shown in Table IV.E.2 and summarized above are substantially less than those experienced by anyone who attempts to use the MUNI during peak periods in the C-3 District. The Downtown Plan EIR loadings are also explicitly contradicted by a letter (on next page) dated December 20, 1983 from Harold Geissenheimer (MUNI General Manager) to Tony Kilroy stating that:

'On the whole, we consider our peak period downtown services - and specifically the 38, 38L, and 38AX/BX Expresses - to be operating at or above 'capacity load' conditions.' (emphasis added)

"Mr. Geissenheimer defined 'capacity load' conditions as above 1.5 persons per seat. The Downtown Plan EIR, however, shows none of the downtown lines at or above 1.5 persons per seat, whereas MUNI has indicated that all their peak period (not just peak hour) services are above 1.5 passengers per seat.

"The Downtown Plan EIR should indicate the basis for the Passenger per Seat ratios shown in Table IV.E.2. Are these based on actual line counts or schedules? Were they verified by the MUNI or PUC?

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"The Downtown Plan EIR should reconcile the contradiction between its statement that MUNI is operating below capacity during the P.M. peak hour while MUNI's letter of December 20, 1983 states that MUNI is at or above capacity during this period. (David Jones)

RESPONSE

As noted in the preceding response, Muni data were supplied by Muni from actual counts. The text quoted from the Downtown Plan Draft EIR regarding loadings on Metro vehicles has been taken out of context. As stated on pp. 97-98 (Supplement, pp. 16-17) of the EIR and on p. IV.E.8 of the Downtown Plan Draft EIR, Muni Metro vehicles can carry a higher ratio of total riders to seated riders than can bus transit vehicles. Because the Level of Service in the DEIR Supplement is calculated on the basis of bus transit vehicles, application of the bus transit Level of Service to the Muni Metro loadings would show worse than actual conditions. The relationship between bus transit Level of Service and light rail (Metro) Level of Service, shown in Interim Materials on Highway Capacity (Transportation Research Board, Circular 212, January 1980, pp. 73-114), is such that Level of Service D loadings on the light rail scale (1.51 to 2.00 passenger per seat) are Level of Service F loadings on the bus transit scale. Since the data shown in Table IV.E.2 of the Downtown Plan Draft EIR and Table 6 of the 505 Montgomery Street DEIR Supplement (EIR, p. 96) analyze the Metro loadings on the basis of bus transit scale, the Metro loadings bias the Level of Service in the southwest corridor. If the Metro loadings were analyzed on the basis of the rail transit scale, the Level of Service in the southwest corridor would be better than that shown in the tables.

With regard to the letter from Muni, Mr. Geissenheimer is describing conditions only on the 38-Geary lines, which are part of the Northwest corridor analysis of the DEIR Supplement. The original Muni-supplied data for the Downtown Plan Draft EIR show the following loadings on the 38-Geary lines for 1982.

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<u>Line</u>	Passengers Per Seat (1982)	
	<u>Peak Hour</u>	<u>Peak Period</u>
38-Geary (Local)	1.26	1.24
38AX-Geary Express	1.05	0.99
38BX-Geary Express	1.00	0.97
38-Limited	1.55	1.53

The loading data used as the basis of the Downtown Plan Draft EIR analysis indicate that in mid-1982 only the 38-Limited line operated over 1.5 passengers per seat during the peak hour and peak period. Muni has an on-going program of load checks (counts at various maximum load points on various routes). The data cited by Mr. Geissenheimer may differ from the data shown above because of differences in where loads on the 38-Geary lines were counted, which counts were averaged, and when the counts were made. Loadings on individual transit routes vary by day of the week and by season of the year.

With regard to the consistency of the data between that shown above and the loadings referred to by Mr. Geissenheimer, the two sets of line-by-line loading data are not directly comparable since they are from different years (i.e., 1981/82 versus 1983). Comparison of the 1984 loadings from the analysis based on the Downtown Plan Draft EIR must be on a corridor basis, as line-by-line loadings cannot be derived from the Downtown Plan Draft EIR analysis. As described in the EIR and in the Downtown Plan Draft EIR, the ratios shown in the tables are for one- and two-hour periods of time aggregated over multiple lines, and thus the loadings on any one line cannot be derived from the loadings in the table. Additionally, even in a line-by-line context, the loadings on individual transit vehicles cannot be derived from the above data since the data are aggregated from multiple vehicles over one and two-hour periods.

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Muni Loading Data, September 1983 Department of City Planning Transportation Guidelines

COMMENT

"COMPARISON OF 1981/82 CAPACITY AND 1984 CAPACITY CONTRADICTS THE DEPARTMENT OF CITY PLANNING SEPTEMBER, 1983 TRANSIT GUIDELINES

"[The Downtown Plan Draft] EIR clearly state[s] that MUNI levels of service showed more overcrowding in 1984 than in 1981/82.

"However, in September, 1983, the DCP issued 'Guidelines for Environmental Review: Transportation Impacts.' Commercial office development EIRs since the date have used these guidelines as their source of information regarding MUNI's existing and future capacity. They show that MUNI peak hour overcrowding has been significantly reduced in 1983 compared to the 1981/82 transit guidelines [data]. Table C-1 compares the September, 1983 DCP guidelines to the previous DCP 1981/82 guidelines:

"

TABLE C-1: EXISTING MUNI LOADINGS AND CAPACITY

Projections of transit ridership and vehicle capacity from the DCP 9/83 transit guidelines for EIRs compared to previous DCP transit guidelines. These figures represent the existing base case for commercial office development EIRs.

<u>MUNI Transit Lines</u>	<u>NEW (9/83) DCP TRANSIT GUIDELINES*</u>		<u>PREVIOUS DCP TRANSIT GUIDELINES*</u>	
	<u># of Riders During Peak P.M. Hour</u>	<u>% of Capacity</u>	<u># of Riders During Peak P.M. Hour</u>	<u>% of Capacity</u>
1/1AX/BX	2,120	97%	2,093	99%
2	383	73%	474	110%
4	327	65%	467	108%
5	521	75%	981	94%
31/31X/31BX	842	83%	1,070	103%
38/38L/38AX	2,176	99%	2,698	104%
Total Richmond Lines	6,369	91%	7,783	100%
KLMN	5,559	84.5%	5,725	96%
[SOURCE: David Jones]				

"

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"For example previous guidelines showed that MUNI KLMN lines at 96% of capacity during the peak P.M. period in 1981/82 whereas the current guidelines show these lines at 84.5% of capacity during that period.

"These 1983 DCP transit guidelines show that 1984 MUNI transit loadings have gotten significantly [lower] since 1981/82. The [Downtown Plan Draft] EIR states that 1984 MUNI transit loadings have gotten significantly greater since 1981/82.

"The Downtown Plan EIR should explain the basis of the DCP 1983 transit guidelines and indicate how they were derived. Did the PUC or MUNI approve of these guidelines?

"The EIR should indicate why there is a conflict between the DCP September, 1983, 'Guidelines for Environmental Review: Transportation Impacts' analysis and the Downtown Plan EIR analysis of transit capacity changes between 1981/82 and 1984. Which document is correct?" (David Jones)

RESPONSE

As noted in the preceding response, Muni supplied the baseline data for the Downtown Plan Draft EIR analysis. Similarly, the 1983 Transportation Guidelines data are from Muni counts. With regard to the "Previous DCP Transit Guidelines," the October 1980 Transportation Guidelines (Attachment 3) show loadings different from those reported in the comment (some of the routes listed in the 1983 guidelines, such as the 1AX, did not exist in 1980).

Muni has an on-going program of load checks (counts at various maximum load points on various routes). Deviation in data can arise from variations in where loads are counted, which counts are averaged and what lines are included. Loadings on individual routes may vary, depending upon the day of the week and season of the year. The data used in the Downtown Plan Draft EIR are comprehensive and self-consistent for travel leaving the C-3 District (and the City as a whole), whereas the Transportation Guidelines data represent summation of data from multiple

locations. The Muni data for the Downtown Plan Draft EIR were carefully chosen to be self-consistent with regard to maximum load points in each corridor. Without knowing the information that comprises the data shown in the comment, it is not possible to determine if the two sets of data are comparable. If the two sets of data are for different load points or are not adjusted for seasonal variation or have different assumptions regarding capacity, trends developed from comparison of the two data sets will not be valid.

With regard to the consistency of the data between the Transportation Guidelines and the Downtown Plan Draft EIR, 1981/82 line-by-line loadings from the Downtown Plan Draft EIR data base are not directly comparable to the 1983 Transportation Guidelines line-by-line loadings, since the two data bases are from different years. Comparison of the 1984 loadings must be on a corridor basis, as line-by-line loadings cannot be derived from the Downtown Plan Draft EIR analysis. No change in Muni capacity was assumed between 1981/82 and 1984 in the transit analysis for the Downtown Plan Draft EIR.

Muni Level of Service Operating Criteria

COMMENT

"The [Downtown Plan Draft] EIR states that the Level of Service goals for transit system vehicles during the peak morning and evening commute periods are as follows:

- "- MUNI motor coaches and trolleys: 1.25 passengers per seat (125% seated capacity)
- "- MUNI Metro vehicles: 2.0 passengers per seat (200% seated capacity)
- "- BART cars: 1.30 passengers per seat (130% seated capacity)

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"Thus, the transit goal for MUNI operation during the peak p.m. period is level 'D' or better.

"Table J.10 on (p. J.36) [of the Downtown Plan Draft EIR] shows that Service Level D reached when there is a loading of 1.01 to 1.25 times seated capacity, Level E is reached when there is a loading of 1.25 to 1.5 of seated capacity, and Level F is reached when there is a loading greater than 1.51 times seated capacity of buses and trolleys.

"Table IV.E.2 shows that, in 1990, MUNI lines to the Southwest and Northwest will be at service level 'E' during the peak p.m. period. Therefore the [Downtown Plan Draft] EIR does not contain an alternative which meets the MUNI transit goals.

"Since MUNI and other transit agencies have established goals for transit service, the EIR should contain a transit scenario which attains those goals. However, the EIR does not. Presumably this is because the MUNI Five-Year Plan does not attain the goals given the amount of downtown development.

"The EIR should indicate how many additional MUNI vehicles the EIR assumed would be needed by 1990 and 2000 and how many more MUNI vehicles would be needed above those already assumed in order for all C-3 District lines to meet the goal of level of D service or better." (David Jones)

RESPONSE

As shown in Table VII.E.1, p.VII.E.2 of the Downtown Plan Draft EIR, transit demand in 1990 would not differ in a statistically significant way between the Downtown Plan and any of the Alternatives that would regulate (i.e., allow less) development. To structure an alternative that would give a development scenario under which Muni could meet its operating goals would require more knowledge of the relationship between Muni operations, funding, and downtown development than is generally available, and would provide an alternative addressing only one issue; Muni, to the exclusion of other transit carriers and other possible downtown planning issues.

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The EIR, p. 98b, second paragraph (Supplement, p. 19) states: "It is important to note that the Five-Year Plan improvements for the transit systems are designed both to provide for future demand increases, and also to improve service levels from existing conditions." Muni's goals for service are used to develop the future levels of transit service to be provided. Built into the Five-Year-Plan process is Muni's estimate of future transit demand (which in the current context extends only to 1988). Thus, because there is a difference between Muni's growth forecasts for 1988 and those in the Downtown Plan Draft EIR for 1990 and 2000, the relative amount of future Muni capacity used to meet future demand requirements will be different for the two approaches. Rather than develop an alternative as described above or structure the analysis to correspond to Muni's five-year planning horizon, the Downtown Plan Draft EIR analyzed the amount of capacity necessary to meet Muni's service goals (and BART's goals) for the year 2000 (see pp. IV.E.28 to IV.E.30 of the Downtown Plan Draft EIR for the percent of capacity necessary to meet Muni's service goals for the year 2000).

Congestion Effects on Muni

COMMENTS

"The bottlenecks that occur at the [Washington/Montgomery/Columbus] intersection are especially impacting MUNI lines 15[-KEARNY], 41-UNION, 1-CALIFORNIA. We want to see an analysis of how often these lines are unable to cross the intersection because it is blocked by cars. How much time is added to the trip? The 15 is the longest route in the system and the slowdown it has on the Montgomery St. portion is playing havoc with its schedules. How does this translate into increased operating costs? What is the increase in crowding caused by the resultant 'bunching.' There is no discussion of the massive development occurring on Montgomery and the significant negative impact this will have on MUNI service. Even if MUNI has sufficient vehicles to handle passenger loads will the intersections be blocked? This should be considered when a large project is proposed for this area. The 1-CALIFORNIA inbound literally comes to a stop at Montgomery during the p.m. rush. How does this slowdown as it approaches its terminus affect the outbound service? Likewise the 41-UNION. All the above problems with MUNI are occurring with

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101 Montgomery, Bank of Canton, and Washington/Montgomery not yet on-line with 456 Montgomery now starting construction, and with Alioto [250 Montgomery St.] and this [505 Montgomery St.] project not underway. Montgomery will be [impassable] when all this is occupied. Why is there no discussion of this in the document? It should be in there." (Bruce Marshall)

"I would commend to you the remarks that I received in writing and I presume all the Commissioners have received from the Muni Coalition, which set out additional comments. Mr. Chin gave you an overview of some of the traffic problems. The Muni Coalition points, especially with regard to Line 15 and other factors, I think are well taken."

"One of the things that this EIR should start addressing as well as the EIR for the Downtown Plan is how the Muni capacity will drop as the congestion increases and the Muni, especially on the lines that go north through Chinatown and south through Chinatown during rush hour, has to reduce speeds because they can't move.

"Right before Christmas, I was in the unpleasant situation of exiting the Sutter-Stockton Garage at about twenty to 5:00. I normally don't drive, and so I am not used to that kind of a situation. When you exit the garage on Stockton St., you go north; it's the only [permitted] way. Which means right into Chinatown traffic. It took me and every bus on that street between 20 and 30 minutes to go from the Sutter-Stockton Garage to Broadway. When that occurs during rush hour, the bus capacity effectively drops on Muni. And you don't have in this EIR, nor do you have it in any of the other documents, how much Muni capacity during the p.m. peak is going to drop as congestion increases in the Financial District and on the feeder streets. That is an issue I think this Commission needs to confront. Because you are projecting increased capacity because you are projecting increased available equipment. And I think that is a myth." (Sue Hestor)

RESPONSE

The increase in congestion and of Muni ridership from cumulative projects, including those on Montgomery St., is discussed in the Supplement to the

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Draft EIR, pp. 14-17 (EIR, pp. 94f-98). The EIR, p. 98, the second paragraph, notes that ". . . constraints of operating on heavily used streets in and around the downtown cause transit vehicle bunching, loss of running time and missed schedules, all of which reduce service, reliability, and ultimately, capacity."

It is not possible to quantify the amount of time that would be added to transit trips as a result of existing or future congestion, since conditions vary on a day-to-day basis. Traffic conditions during the Christmas season are not representative of normal conditions. The especially high traffic volumes on Stockton St. during the Christmas season, generated by the Union Square retail district, aggravate existing weekday and weekend traffic congestion on Stockton St. through Chinatown. This congestion in Chinatown is due to the narrow one-lane northbound design of the street, double-parking, and intensive sidewalk activity.

Future Muni Capacity

COMMENT

"- page [128]. There is reference made to Dean Macris' memo concerning MUNI future capacity. The memo referred to came about when then Commissioner and PUC head Richard Sklar announced that he would no longer vote for approval of office permits until he had assurances that MUNI would be able to meet all demand being placed on it. In order to placate Sklar, Macris came up with some figures that showed that, yes, MUNI would be able to meet demand. This is a blatant example of a report where the figures are manipulated to uphold an already determined conclusion. Sklar rejected the findings and so did our organization. We feel that reference to this document should be deleted, or at the least, Sklar's rejection of its findings be noted.

"- A-39; It says MUNI is proposing an increase in capacity of 13%. How was that figure reached? If it was reached by simply adding up the gross capacity of MUNI's expected fleet then it is not accurate. Any discussion of capacity must use the figure of capacity available, since MUNI never even comes close to having 100% of its vehicles operational at any time. The diesel fleet has

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hovered around a 50-60 percent of capacity available, LRV's 70-75%, far below the targeted number (all systems have 'float' extra vehicles, MUNI has been unable to, in large part due to the excessive office development downtown).

"- A-48, Figure D-I should read J-CHURCH inbound." (Bruce Marshall)

RESPONSE

The third paragraph on p. 128 of the EIR is replaced with the following:

"The San Francisco Municipal Railway Short-Range Transit Plan, 1983-88, was published by the Public Utilities Commission on July 15, 1983. This plan outlines capital improvements that will be necessary to meet increased demand for Muni services, and associated projections of operating costs and revenues.

"Proposed capital improvements for fiscal years 1984-88 indicate that in the first year of the Plan, capital expenditures would be about \$90 million. According to the Plan, Tables 60 and 61, these improvements 'can be reasonably achieved' because 'up to \$102 million could be available under optimistic funding scenarios. In the worst case, only a little over \$55 million would be available', which would require deferral of some capital projects. 'A shortfall would not significantly affect the scheduled implementation of the highest priority rehabilitation and replacement projects required for the effective delivery of existing and committed transit services.'

"Revenue projections for future years (beyond fiscal year 1983-84) are sensitive to funding decisions made by the state and federal governments. Projections in the Plan for these future years indicate inadequate funding levels for proposed capital improvements."

The Muni capacity increase between 1984 and 1990 discussed on p. 98b of the EIR (Supplement, p. 18) is based on the above-cited Muni Five-Year Plan; Muni capacity increases between 1990 and 2000 are based on Scenario

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XIII of Projections of Future Muni Demand and Vehicle Requirements (San Francisco Public Utilities Commission, June 1982). The two documents contain analysis of proposed capacity increases on a line-by-line basis during the peak period.

Figure D-1 on p. A-48 has been changed to read "J - Church . . . Inbound."

COMMENTS

"THE JAMMED INTERSECTIONS RESULTING FROM INCREASED VEHICLE TRAFFIC WILL SO IMPEDE MUNI AND OTHER TRANSIT SYSTEMS SUCH THAT MERELY ADDING MORE TRANSIT VEHICLES WILL NOT BE ABLE TO INCREASE TRANSIT CAPACITY.

"Did the [Downtown Plan Draft] EIR analysis of transit capacity and transit loadings take into account the slowdown of surface transit operations which will result from jammed and congested intersections? If so, how? Do the transit loadings and passenger per seat loadings in Table IV.E.2 take into account the decrease in the ability of surface transit to move in 1990 and 2000?

"Given that traffic congestion will 'disrupt surface MUNI operations' [Downtown Plan Draft EIR, p., IV.E.33], will the 67 and 150 additional MUNI motor coaches and trolleys needed by 1990 and 2000 respectively be able to effectively add capacity to the MUNI system if their (and existing) transit vehicle movement will become more impaired with time?

"The [Downtown Plan Draft] EIR notes that 'surface transit operation would be slowed' due to increased congestion and 'crush' loadings would increase. However, Table IV.E.2 shows MUNI transit loading (in terms of passengers per seat) improving from 1984 to 1990 and 2000. Thus the transit section of the Downtown Plan EIR predicts MUNI transit loadings during the peak p.m. period will improve, while the traffic section of the Downtown Plan EIR states it will deteriorate. The EIR should recalculate Table IV.E.2 based on the inability of surface transit to move because of congestion on San Francisco streets." (David Jones)

"Referring to page 26, paragraph 5 [of the Supplement]: Was the decreased level of Muni service due to congestion factored into the Level of Service calculations on page 15? If not, please do so." (Carl Imperato)

RESPONSE

As noted in the comment, the Downtown Plan Draft EIR and the 505 Montgomery Street DEIR Supplement acknowledge that Muni operations will be impeded by increased congestion. To the extent that congestion currently impeding operation is inherent in the baseline data used, the future analysis has included congestion effects. Because congestion effects are stated to be an impact on transit operations, several mitigation measures are presented in Section V.E. of the Downtown Plan Draft EIR that would reduce the impact of congestion on Muni (see pp. V.E.15-V.E.19, especially Measures 19 and 20).

Future Transit Levels of Service, With Assumed Transit Improvements and No Development

COMMENT

"FUTURE TRANSIT LEVELS OF SERVICE

"Page 3 [of the Supplement] states that 'Cumulative development to the year 2000 would be expected to cause the following changes in transit Levels of Service during the peak period . . .', and goes on to show a number of increases in service levels. Clearly, cumulative development will not cause these improvements. As the last paragraph on page 19 points out, Level of Service improvements are the result of 5-Year Plans which are designed to improve service levels from existing conditions. Cumulative development merely serves to diminish or eliminate those improvements.

"In order to effectively see the impacts of cumulative development and determine the correct cost for transportation mitigation measures to be imposed, the Supplement must show the year 2000 conditions (including Levels of Service) with the assumed transit improvements and without any cumulative development." (Carl Imperato)

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RESPONSE

As noted in the sentence following the one quoted in the comment: "These projections include planned capacity increases of transit carriers." The DEIR Supplement, p. 19, third paragraph states (EIR, p. 98b): "It is important to note that the Five-Year Plan improvements for the transit systems are designed both to provide for future demand increases, and also to improve service levels from existing conditions."

Because the assumed transit capacity improvements are designed to include service increases to improve existing operating conditions as well as to serve estimated future demand from new development, analysis of the change in level of service as requested in the comment would attribute to, future development service, increases designed to meet transit agencies' operating goals.

Table D-5, p. 260 of this chapter, is added to the EIR on p. A-43. The following text is added to p. 98b of the EIR (Supplement, p. 19): "Table D-5 shows three conditions: existing (1984) demand compared to 1984 capacity, and year 2000 conditions with the assumed capacity improvements both with and without cumulative development. Year 2000 conditions with the assumed capacity improvements and without cumulative development represent an unreal situation, in that the transit agencies would not implement all the improvements if development were to stop. That is, the agencies will add capacity only to the point where their service goals are met. The data in Table D-5 can be read to indicate the relative amounts of future capacity increases subsumed by future demand from cumulative development."

Cumulative Effects on AC Transit

COMMENT

"On page 12 [of the Supplement]: it is incredible that 22,100 work pte's generated 1,700 AC Transit pte's (Note: the DPDEIR assumes that non-work ptes' generated no AC Transit pte's whatsoever - Appendix J-12), yet 41,400 work pte's generate just 200 AC Transit pte's. Please explain.

TABLE D-5: OUTBOUND REGIONAL TRANSIT DEMAND AND LEVEL OF SERVICE

Transit Agency	1984		2000 w/o Cumulative Development /a/,/d/		2000 with Cumulative Development /a/	
	<u>P/S/b/</u>	<u>LOS/c/</u>	<u>P/S</u>	<u>LOS</u>	<u>P/S</u>	<u>LOS</u>
<u>P.M. Peak Hour</u>						
Muni						
Northeast	1.16	D	0.85	C	1.05	D
Northwest	1.26	E	1.01	D	1.25	D
Southwest	1.45	E	1.15	D	1.42	E
Southeast	1.06	D	0.73	B	1.01	D
BART						
Transbay	1.53	F	0.82	C	1.42	E
Westbay	1.10	D	0.81	C	1.06	D
AC Transit	0.94	C	0.94	C	1.06	D
GGT Bus	1.00	C	0.57	B	0.91	C
GGT Ferry	0.57	B	0.20	A	0.38	A
Tiburon Ferry	0.40	A	0.40	A	0.60	B
SamTrans	1.12	D	0.73	B	1.19	D
CalTrain (SPRR)	0.61	B	0.50	A	0.79	C
<u>P.M. Peak Period</u>						
Muni						
Northeast	1.06	D	0.77	C	0.95	C
Northwest	1.13	D	0.90	C	1.05	D
Southwest	1.31	E	1.04	D	1.29	E
Southeast	1.00	C	0.66	B	0.88	C
BART						
Transbay	1.54	F	0.82	C	1.40	E
Westbay	0.80	C	0.60	B	0.77	C
AC Transit	0.95	C	0.95	C	1.16	D
GGT Bus	0.90	C	0.51	A	0.81	C
GGT Ferry	0.56	B	0.19	A	0.33	A
Tiburon Ferry	0.60	B	0.60	B	1.00	C
SamTrans	1.12	D	0.74	B	1.15	D
CalTrain (SPRR)	0.68	B	0.56	B	0.77	C

/a/ Capacity includes assumed improvements from Downtown Plan Draft EIR analysis.

/b/ Passengers per Seat is the ratio of total demand to seated capacity.

/c/ Level Of Service is scale ranging from A to F that relates P/S ratios to passenger loading conditions on transit vehicles.

/d/ An unreal situation. Capacity increases will not occur if development stops.

SOURCE: Environmental Science Associates, Inc.

"The claim (page 14) [of the Supplement] that limited AC Transit capacity increases will also limit the demand for AC Transit service has no merit. For other transit carriers, demand is assumed to cause Levels of Service to deteriorate to Level F. Why are AC Transit riders presumed to stop demanding service when service levels drop to Level D, when their alternative (BART) is presumed to operate at Levels E-F?" (Carl Imparato)

RESPONSE

The 1,700 AC Transit riders referred to in the comment are for the list-based analysis, which does not use the data from the Downtown Plan Draft EIR, but rather uses the 1983 Transportation Guidelines modal splits. The comment illustrates the disparity that arises from assuming unchanging modal split as has been done for the list-based analysis. The 200 AC Transit riders referred to in the comment are the increase from only the C-3 District between 1984 and 2000 as projected in the Downtown Plan Draft EIR. As noted on p. 11 of the DEIR Supplement (EIR, p. 94c), the results of the two analytical methods are not directly comparable. The lower projection from the analysis based on the Downtown Plan Draft EIR is made on the basis of the AC Transit Five-Year Plan, which projects no capacity increase, and thus, results in an assumption of a modal shift away from that carrier. The list-based analysis assumes that the same proportion of future downtown workers will ride AC Transit as do today, regardless of the ability of AC Transit to accommodate the increase.

AC Transit transbay service serves a developed portion of the East Bay, within which the potential to absorb new demand from C-3 District commuters is limited. BART, conversely, provides service to developing areas of the East Bay where increases in residential populations are more likely to occur. Also, on the basis of existing conditions, BART riders appear to be able to tolerate higher levels of loadings than AC Transit passengers.

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Caltrain Ridership Estimates

COMMENT

"Ridership estimates for Caltrain [on p. 15 of the Supplement] are taken from the San Francisco Downtown Plan which does not assume construction of the train lines extension to the Central Business District." (Mara Melandry)

RESPONSE

The ridership data for CalTrain shown in Table 6, p. 96, of the EIR (Supplement, p. 15) are projections made using 1981/82 CalTrain data as a base. As noted in Appendix J of the Downtown Plan Draft EIR (referenced on p. 18 of the DEIR Supplement), the CalTrain extension to downtown has not been assumed to occur; all other improvements proposed by CalTrain have been assumed to occur. Thus, only the effect of additional ridership that may be attracted by an extension has not been numerically analyzed. The Downtown Plan Draft EIR discusses the extension of CalTrain service in Mitigation Measure 9, p. V.E.8. The Downtown Plan Draft EIR analyzes the CalTrain extension, the BART extension to the San Francisco Airport, and the Muni Metro extension to the vicinity of Fourth and Townsend Sts. as three projects essentially competing for the same funding, although the Metro extension would serve a somewhat different ridership market than the other two proposed extensions.

CUMULATIVE TRAFFIC IMPACTS

Future Traffic Levels of Service

COMMENT

"Page 24, paragraph 4 [of the Supplement]: The descriptions of traffic flow conditions are inadequate. The [Downtown Plan Draft] EIR assumes that auto flows into the City would be limited by capacity constraints of the transportation corridors. This implies capacities of 1.0 or greater - i.e.,

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Level of Service F, not E. Why, then, is Level of Service E presumed here? Even within Level of Service F, there is a wide range of flow conditions (30 mph average flow down to approximately 0 mph average flow).

"What average speed is associated with the traffic flow conditions due to cumulative development? (Average speed for each corridor should be given.) (Carl Imparato)

RESPONSE

The comment misinterprets speed-flow relationships and Levels of Service. The Highway Capacity Manual (Highway Research Board, Special Report 87, 1965), employs a dotted line to indicate Level of Service F conditions on a speed-flow plot (p. 81, Figure 4.1 of the Manual). As explained in the text of the Manual, there is no physical relationship that corresponds to the dotted line in the figure. Rather, Level of Service F is a condition of non-flow as operations are jammed and flow is sporadic. Thus, Level of Service E represents the highest possible flow past a point of measurement. Because of the empirical data (see Figure 3.44, p. 66 of the Manual) used to develop the Level of Service scale, flows at Level of Service E (as stated on p. 100a of the EIR -- Supplement, p. 24) are approximately 35 mph for facilities with average highway (uncongested) speeds of 50 mph or higher. Should the comment be intended to illustrate gradations in Level of Service F conditions, the speed/flow and Level of Service relationship would need to be replaced by flow-density (vehicles per lane per mile) relationships from which conditions from "free flow" to "jam" density could be determined. The use of such data has a limited utility, as the relationships are complex and subject to misinterpretation. For further discussion, refer to pp. 49-70 of Traffic Flow Theory (Transportation Research Board Special Report 165, Gerlough and Huber, 1975).

Regional Constraint Points

COMMENT

"TRANSPORTATION NETWORK CAPACITIES - THE CAPACITIES OF THE BRIDGES, HIGHWAY 101, AND INTERSTATE 280 BASED ON ACTUAL OPERATING EXPERIENCE SHOULD BE DISCUSSED AND EVALUATED

"A slow vehicle, stall, accident, or other obstacle to optimum flow conditions on the bridges or on the highways which they feed seems to be almost a daily occurrence rather than the exception. The Downtown Plan EIR should contain an estimate, based on actual experience, of what percent of the time the bridges and highways have no impediments to flowing at optimal capacity during the peak p.m. rush hours. (Perhaps KCBS traffic watchers can give you an estimate). Table [xxxxxxx] should be expanded to include an average 'realistic' (non-optimal) indication of the average bridge and highway vehicle per hour capacities based on operating experience.

"The Downtown Plan [Draft] EIR should indicate what the traffic capacities of the transportation network are during rain or inclement weather.

"Many C-3 District users of the Bay Bridge park in parking lots in the South of Market area adjacent to or under the Bay Bridge which are not located in the C-3 area. Because of the congestion of the First St. and Harrison [St.] Bay Bridge on ramp, many of the automobiles with employees from the C-3 District take other city streets and approach the Bay Bridge from approach directions other than the C-3 area.

"The EIR, therefore, may be underestimating the amount of Bay Bridge traffic attributable to the C-3 area.

"The Downtown Plan EIR should explain why the methodology of determining the origin of automobile trips from the C-3 District based on the approach direction of traffic to Bay Bridge on-ramps is valid, and should revise the methodology." (David Jones)

RESPONSE

The traffic data used in the EIR and the Downtown Plan Draft EIR show representative average peak-period traffic conditions (less than optimal capacity) (see pp. 100-101 of the EIR -- Supplement, pp. 23-24). The data do not reflect seasonal peak conditions (such as holidays) or conditions impeded by inclement weather or severe accidents. Because of the temporary nature of these abnormal conditions, the average conditions used in the analysis are more representative of day-to-day operating conditions, which provide a better basis for analysis of transportation operations. Thus, it is not relevant to know how much of the time optimal flows occur.

Speeds measured (50 mph) in travel-time and speed runs conducted by CalTrans on US 101 southbound during the peak-hour and peak-period indicate that the volume and capacity relationships for US 101 (and I-280) shown in Table 7A are valid. As noted in the response to the following comment, the Golden Gate Bridge data has been supplied by the Bridge District, and Bay Bridge data has been used to adjust the theoretical capacity for eastbound traffic to a lower value.

With regard to the determination of C-3 traffic on the Bay Bridge, the analysis considered the effects of congestion at various points in the downtown and relied, not upon a single access point, but upon analysis of all the access points to the bridge including the Central and Embarcadero Freeways. Appendix J of the Downtown Plan Draft EIR and the supporting documentation contain further explanation of this analysis. This material was incorporated by reference in the EIR, p. 108.

Bay Bridge and Golden Gate Bridge Capacity

COMMENT

"Table 7A, page 25 [of the Supplement]: The '1984 Demand' column should probably be labeled '1984 flow rate' because the word demand suggests these are the total volumes that want to travel past the screenline. In the case of

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the Bay Bridge, demand exceeds the bridge's capacity, causing severe traffic back-up every week-day P.M. peak period.

"Page 24, paragraph 3 [of the Supplement]: if the 1984 peak-hour demand for the Bay Bridge, shown in Table 7A, is the effective Capacity, then it should be used in the Capacity column.

"Since 1975, we have made several counts at the Golden Gate Bridge. Our counts indicate that the northbound P.M. peak hour traffic volumes is at capacity, at about +6,100 vehicles per hour. The peak fifteen minute count is about 6,400+. These figures are well below those shown on Table 7A, page 25 of the Supplemental DEIR." (Mara Melandry)

RESPONSE

The column heading "1984 Demand" in Table 7A is changed to read "1984 Volume". As noted in the text, the volumes on the Bay Bridge are variable, depending on conditions from day to day and thus the 1984 volume represents an at-capacity situation. MTC (CalTrans) counts have shown eastbound volumes as high as 9,200 vehicles per hour in the recent past (Traffic Survey Series MA-60, April 1983), and thus the theoretical capacity in the table is considered valid.

The source of the Golden Gate Bridge data in the EIR is the Golden Gate Bridge Highway and Transportation District and is based on counts in the month of November from 1937 to 1982. (See Note /8/, p. 108 of the EIR -- Supplement, p. 30). Recent changes (spring 1984) in the speed limit or congestion caused by the ongoing redecking of the Bridge have not been reflected in the data used in the analysis.

Neighborhood Traffic Effects

COMMENT

"IMPACT OF AUTOMOBILE TRAFFIC ON SAN FRANCISCO NEIGHBORHOOD STREETS

"[The Downtown Plan EIR states that] 'surface routes . . . allow traffic from

the downtown to bypass the U.S. 101/I-280 interchange.' (p. IV.E.13)

"Similarly, city streets parallel to Lombard Street in the Marina and Geary St. and Pine/Bush to the Richmond are used to get to the Golden Gate Bridge and other City streets are used to get to Daly City to avoid the 101/I-280 interchange.

"The Downtown Plan EIR should indicate the most likely 'parallel routes' which C-3 District workers will use to get to the Golden Gate Bridge, the Peninsula, and Daly City [bypassing the US 101/I-280 interchange]. This should include an analysis of the increased traffic volumes that will be experienced on selected San Francisco city streets and the effect this will have on conditions at key intersections. The [Downtown Plan Draft] EIR should also indicate what effects the increased automobile congestion on city streets will have on the ability of transit to function at current schedules." (David Jones)

RESPONSE

The Downtown Plan DEIR raises the issue of increased traffic on parallel routes as an informational point since it is beyond the accuracy of the analysis to predict how individual motorists will choose routes sixteen years in the future. The EIR discussed the effects of auto congestion on transit operations on p. 102 (Supplement, p. 26).

Increased Commute Period

COMMENT

"INCREASED LENGTH OF THE COMMUTE PERIOD

"The length of a person's commute is a key factor in their quality of life. The Downtown Plan EIR should give some indication of how much longer the morning and evening commute periods will be extended by 1990 and 2000." (David Jones)

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RESPONSE

The EIR, p. 100a (Supplement, p. 24), discusses the qualitative changes expected in the commute periods in 2000. The overall two-hour commute is not expected to increase substantially in the future. Rather, the occurrence of peak-of-the-peak conditions, now less than one-hour, most likely would expand to fill the one-hour peak. As shown in the transit and traffic analyses of the EIR (pp. 94f-98c and 100a-102 (Supplement, pp. 14-20 and 23-27)) sufficient capacity would be available in the two-hour period to absorb the majority of the demand.

CUMULATIVE PARKING IMPACTS

Parking Policies Effect on Transit Use

COMMENT

"On transportation, well, around Table 6 of p. 96, and I am not a transportation planner, but from what I read in this Table 6, it gives you some sort of assumption. It talks about, lists all the expected ridership, the percentage of capacity that would be taken up by people from all the other developments in the area, as well as 505 Montgomery.

"One of the things that is mentioned throughout the transportation section is that if traffic is going to get so bad down here, and if parking is going to be so bad down here, as it already is, it's going to divert some ridership. It's going to divert some people from cars to transit. And some might interpret this as being somewhat wishful thinking, but what I generally think happens sometimes is that when people can't find parking in the established off-street parking facilities, what they wind up doing is taking a chance they can park on a meter all day or something like that. And enforcement being what it is sometimes, they can sometimes get away with parking on a meter all day. And this sort of flow between parking demand on long-term parking and short-term parking, how that works, and how this affects the transit demand is something that should be treated in a little more detail." (Alton Chin)

RESPONSE

The EIR, on pp. 103-104, presents a revised cumulative parking analysis that shows that parking demand would be expected to continue to increase over time. However, through improved transit service and continuation of trends toward less single-occupant auto use, it would be expected that parking supply and demand could balance over the downtown area. The revised analysis is based on the assumption that less auto use and greater transit use by commuters will occur in the future.

COMMENT

"Referring to paragraph 2 of page 29 [of the Supplement]: Discussions of the 'Goals of the Downtown Plan' are flights of pure fancy. Even the [Downtown Plan Draft] DEIR does not claim that these 'Goals' are grounded in reality. Since EIRs must be based on unbiased objective information rather than wishful thinking, please excise all reference to these 'Goals,' as they may dupe the public into thinking that these 'Goals' possess a degree of legitimacy which they clearly do not." (Carl Imparato)

RESPONSE

The Goals discussion is provided on p. 29 of the 505 Montgomery DEIR Supplement (EIR, p. 104) to provide a perspective on the worst-case analysis in the impacts discussion covering cumulative impacts using the Downtown Plan Draft EIR methods. This perspective is also provided on p. 20 of the Supplement regarding transit impacts. These Goals are implementing actions proposed in the Downtown Plan (see pp. 111-144 of the Downtown Plan) and are therefore part of the project described in the Downtown Plan Draft EIR (they are discussed in detail in the Mitigation Section of that EIR, pp. V.E.4-V.E.28).

The Goals were not included in the analysis of either the transportation impacts of the Plan or the cumulative transportation effects in the 505 Montgomery EIR, because a worst-case analysis is more conservative, in that the transportation improvements which would enable the Goals to be

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met might not be undertaken. This worst-case analysis does not assume any of the proposed transportation improvements, except the vehicle acquisition portions of the 5-Year Plans. This does not mean that the Plan Goals for transportation are pure speculation or "wishful thinking." An evaluation of the Downtown Plan transit-related policies and implementing actions by a transit finance expert indicates that the Plan's goals are reasonable and are likely to be met (see A. Lee Knight, "An Analysis: The Financial Feasibility of Public Transit Recommendations in the San Francisco Downtown Plan," February 1984, pp. 6-7). In addition, analysis indicates that only some of the transportation improvements need to be undertaken to deal with the impacts identified in the Downtown Plan Draft EIR and to meet the Goals of the Downtown Plan (see proposed amendments to the Downtown Plan, p. 23). As noted in this analysis, the only three capital projects included in the Goals that are needed to accommodate downtown growth are the Muni Metro turnaround, the Muni Metro extension to Fourth and Townsend Sts., and the BART turnback facilities in Colma, adjacent to the Daly City BART station. The Goals were mentioned in the impacts discussion to provide a perspective on the future if the Downtown Plan were adopted and implementing actions occurred; their mention does not invalidate or bias the impacts analysis.

Downtown Plan Parking Goals

COMMENT

"WILL LIMITING PARKING PLACES IN THE DOWNTOWN AREA ENCOURAGE MORE TRANSIT USE?"

"The Downtown Plan EIR notes that it is the policy of the Planning Commission to limit parking places in the downtown area in order to encourage the use of public transportation.

"How many parking places have been added or destroyed in the downtown San Francisco area between 1981 and 1984?"

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"What has been the increase or decrease in the automobile usage on the Bay Bridge and Golden Gate Bridge between 1981 and 1984? What has been the increase or decrease in public transit usage on the Bay Bridge and Golden Gate Bridge between 1981 and 1984?

"Does this information verify the assumption that limiting parking places in the downtown area will encourage use of public transportation?" (David Jones)

RESPONSE

The policies of the Downtown Plan noted in the comment regard employee (or commute) travel. The Downtown Plan recognizes that some visitor (i.e. non-employee) travel will continue to occur in autos and thus short-term parking is necessary. Because of the limited data available, it is not possible to determine an exact count of space lost or gained in "downtown San Francisco" between 1981 and 1984. On the basis of the March 10, 1984 Cumulative List, the net balance of lost or gained spaces shows that about 4,000 spaces would be lost to development and that about 6,000 spaces would be gained, for a net addition of 2,000 spaces. The increase or decrease in automobile usage on the Golden Gate and Bay Bridges does not relate directly to an increase or a decrease in auto traffic in downtown San Francisco. As noted in the Downtown Plan DEIR (p. J.20-21), at least half of the p.m. peak period bridge traffic originates in areas other than downtown San Francisco. A more relevant source is the 1983 San Francisco Cordon Count (JHK and Associates, July 1983). As noted on p. 3-3 of the Executive Summary, "Vehicle traffic has decreased slightly since 1965 . . . This reverses a trend of steady traffic increase since 1947 . . . in contrast, person trips crossing the cordon line have increased . . . since 1965."

NOTE - Transportation, Circulation and Parking

/1/ Robert Giori, Roger Owen Boyer and Associates, telephone conversation, February 1, 1984.

AIR QUALITY

DOWNTOWN AIR QUALITY MONITORING

COMMENT

"Page 39 and 40, the air quality. I know it's boring, but I still think the air quality monitoring should be done on-site. I am beginning to think that there ought to be some kind of a new way you can do it by smell, because Montgomery St. on any given day at a traffic time -- the same, really, on Van Ness Ave. -- the odors are just getting really strong. I can't believe that if I smell the air, there is not something going on that they could test. Mr. Macris, I think it's time for another discussion with [the Bay Area Air Quality Management District] as to whether we could have real monitoring downtown instead of on just Potrero Hill. I notice really a difference when I go visit my daughter on Potrero Hill. The air really doesn't smell bad. And downtown, it's getting tough." (Commissioner Bierman)

RESPONSE

The Air Quality section of the DEIR Supplement (pp. 31-37), which replaces pp. 109-111 of the EIR, includes a discussion of carbon monoxide (CO) monitoring in 1980-81 near the project site, at Washington and Battery Sts. Page 110 of the EIR (Supplement, p. 33), in the second full paragraph, last sentence, states that CO monitoring "data indicate that some locations in San Francisco, particularly those near streets with high traffic volumes and congested traffic flows, may experience violations of CO standards under adverse meteorological conditions."

Monitoring aimed at local sources provided data on localized pollutants, such as CO and total suspended particulates (TSP). CO is odorless. Some components of TSP can be odorous. Primary odor sources associated with vehicular traffic are diesel-fueled vehicles (buses, trucks, and some cars) emitting aldehydes (a category of organic compounds), some gasoline-fueled cars emitting reduced-sulfur compounds, and some cars with worn seals emitting oil fumes. No ambient health standards exist for such

compounds. Odor thresholds are generally far below levels at which a health hazard occurs. That is, one can smell a substance at concentrations that are far below hazard levels. Some of the odors described above can be smelled near a truck (car) emitting these substances. Odors cannot be monitored reliably by instrument, because they are generated by a complex mix of chemical compounds with varying detection thresholds. Odors are regulated by the BAAQMD with a complaint/nuisance system, which uses human response testing to establish whether an alleged odor problem is subject to regulation.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

EMPLOYMENT

Existing Vacancies On-Site

COMMENT

"And looking at those buildings, looking at those jobs, vacant on those two [616-618 Commercial St.], how did they become vacant? And it's insufficient in the EIR and it's insufficient to me for them to say, 'Well, we just bought the property six months ago and it was vacated by the prior owner.' The owner should know how the property was vacated. Find out in the EIR. Tell us how the three 'vacants' became vacant on p. 41. They are all on p. 41."
(Sue Hestor)

RESPONSE

The information below summarizes how the unoccupied space on the site, identified in Table 2, pp. 41-42 of the EIR, became vacant. Two additional vacancies, Bank of America and Xin Feng She, occurred after preparation of the Draft EIR, and are also discussed below. The effects due to the number of the employees of these two tenants are included in the EIR as part of the base-case. No eviction notices were issued in any of the following cases:/1/

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The Bank of America, in late 1983, vacated a portion of the 11,660 sq. ft. it leased at 505 Montgomery St., as a result of space-planning decisions. Also in the 501-505 Montgomery St. building, Paper & Ink vacated 1,263 sq ft. of office space in 1982 at its request, upon a renegotiation of the lease for that space together with its ground floor premises, which it continues to occupy.

The Green Leaf Restaurant vacated 1,285 sq. ft. of ground-floor retail space at 616-618 Sacramento St. in 1983, upon receipt of a cash settlement for the remaining portion of the lease. Also at 616-618 Sacramento St., Heng Tang optical laboratory vacated 643 sq. ft. and Xin Feng She vacated 1,285 sq. ft. during 1983, as a result of their space-planning decisions.

The Red Knight Restaurant vacated 4,887 sq. ft. of retail space at 624 Sacramento St. in 1983, upon receipt of a cash settlement for the remaining portion of its lease.

Rental History of On-Site Uses

COMMENT

"Has the landlord evicted tenants or raised the rent to remove them? I want that in the EIR. What has been the rent history? Have the rents been stabilized over the past couple years, or, as the example at the building at Kearny near Union Square, have they quadrupled the rents on everyone in the building, effectively vacating the building? Which is happening right now on the building that has Olivier's Purse Repair, which is a building I know about because it's my purse repair shop." (Sue Hestor)

RESPONSE

The Empire Group has owned the 501-505 Montgomery St. building since 1978, and 615-617 Commercial St. since 1981. Tenant turnover in these buildings since that time is described in the response to the previous comment. Bank of America, at 501-505 Montgomery St. and 615-617 Commercial St., is the largest tenant on the site, and its original lease agreements predate

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ownership by the sponsor. As leases expired, rentals were increased, most recently, to approximately \$1.85 per sq. ft. per month (\$22.20 per sq. ft. per year) for upstairs office space, fully serviced. In some cases, leases allow periodic increases based upon increases in the Consumer Price Index or the Wholesale Price Index. In no instance has a tenant left as a direct consequence of a rental rate increase. In ground floor space, the only new tenant has been Xerox Corporation, which took over space at 615 Commercial St. when CIT Financial Corporation requested early termination of its lease. The CIT lease rate was originally established in 1974, and by 1981 was approximately \$1.00 per sq. ft. per month (\$12 per sq. ft. per year). The new lease with Xerox was established at a rate of approximately \$2.00 per sq. ft. per month (\$24 per sq. ft. per year)./1/

With respect to other existing buildings on the site, The Empire Group has acquired ownership or control at various times within the last two years. Leases have not been renegotiated for higher rents since these properties were acquired, and all tenants are either on previously existing leases or month-to-month agreements./1/

Relocation of On-Site Businesses

COMMENTS

"I would also like to know what, if any, consideration is being offered or given to present tenants with regard to re-location and a right to come back at present rates plus cost of living. Retail space in and by itself is not enough, we must try to maintain the present mix of retail types of business. What if any is/are the main benefit(s) of this project to our City?"
(Commissioner Nakashima)

"And tell us: Where are these people going to go. Are they all going to go out of business? Are they going to have rents that triple? I mean, how are you meeting the goals of the Commerce and Industry Element if you allow all of these jobs, all of these businesses to be displaced so that executives making \$50,000 a year can be there? And where are, where are there restaurants, where are people in the Financial District going to go for opticians, photo

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labs, restaurants, photo copiers, all of those diverse services that are not available or available at astronomical levels when a Citicorp building goes in, when a Crocker Plaza goes in? You are putting a lot of pressure on blocks like these. Because you people go to the peripheral areas on Kearny St. in Chinatown for those kinds of services because they may be affordable still because their rents haven't gone through the roof." (Sue Hestor)

RESPONSE

The project would displace 19 existing on-site businesses employing about 185 workers. About 70 other workers would remain in the two buildings proposed to be retained. Replies to a survey of relocation plans were received from 16 of the 19 lessees. Fourteen of the 16 survey respondents expressed a desire to relocate and two stated they would go out of business. Although most tenants did not have definite relocation plans (at the time of the survey, February-March 1984), most stated they would prefer to relocate in San Francisco, primarily in the Financial District. Four tenants expressed a desire to return to the new 505 Montgomery St. building. Four tenants had definite relocation plans, all to San Francisco locations; four expressed concern about relocation and rental costs./2/

As discussed above in the previous response (p. 274-275 of this chapter), the project sponsor has negotiated settlement allowances with several of the tenants; no eviction notices have been issued. The sponsor has not yet established the range of services that would be provided in the project. The sponsor will discuss, with any current tenant, potential occupancy in the project. Rents in the new building would be higher than existing tenants' rents. This might affect the ability of current tenants to move back to the new building.

The EIR, on p. 49, discusses the relationship of the project to the Commerce and Industry Element of the Comprehensive Plan, and notes that the loss of retail space and displacement of existing uses would not respond to policies of the Plan.

CUMULATIVE HOUSING EFFECTS

Regional Housing Effects

COMMENTS

"In the past two years there have been new and significant trends in location of office space and housing in the region.

- "- A major area for new development in San Francisco is in the South of Market area and in the industrially zoned areas outside the C-3 District.
- "- A May, 1984 article in the San Francisco Chronicle published a report which showed that San Francisco housing is increasingly being used by people employed in the Peninsula.
- "- Commercial office and business development outside of San Francisco is creating a housing demand which cannot be accommodated by the counties in which that development occurs.

"Do the other counties in the Bay area have plans or ability to construct the housing (in excess of housing needed to satisfy internally generated housing demand) to satisfy the demand for housing from San Francisco development that the Downtown Plan EIR presumes will be accommodated in their counties?"
(David Jones)

"Regarding the third paragraph of page 13 [of the Supplement] ('The differences...'): How many new commuters are assumed to live in each area of the region? Please compare this to the new housing stock in those regions and to demands placed on that housing stock by growth in the other areas of the region." (Carl Imparato)

RESPONSE

Appendix I in the Downtown Plan Draft EIR describes the methodology used to forecast future residence patterns of C-3 District workers (pp. I.8-I.30). The diagram in Figure I.1 (p. I.10) summarizes the

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factors considered. Future labor force, housing and employment throughout the region were among the factors considered.

Regional Housing Supply

With regard specifically to housing, data summarizing the past, current, and projected future amount and distribution of housing through the region were factors in the forecast. The U.S. Census provided statistics on past and current (1980) housing supply in each Bay Area county. The Association of Bay Area Governments (ABAG) provided the forecasts of future housing supply in the region. The housing supply data are summarized in the Downtown Plan Draft EIR in Appendix I (see Table I.21, p. I.12).

The future context for housing supply in the region is summarized in the Downtown Plan Draft EIR text (see pp. IV.D.58-60). The following points are based on the ABAG regional forecasts and Downtown Plan Draft EIR residence patterns forecasts:

- The production of housing throughout the region is expected to recover from the low levels of the early 1980s. However, the production and cost of housing is unlikely to return to the conditions of the 1970s. The regional housing supply forecasts used in the Downtown Plan Draft EIR reflect an annual average addition over the 20 years from 1980 to 2000 of about 33,000 units per year. Between 1970 and 1980, about 44,000 units per year were added in the region. Housing is expected to remain more costly relative to incomes and to other goods and services than it was in the 1960s and 1970s.
- Housing development is expected to occur throughout the region. The most potential for housing development, particularly in the more affordable price ranges, exists at the periphery of the region. At the same time, the increasing acceptance of higher-density, central-city living is likely to support more infill residential development than has occurred in the past.
- Most new housing development is expected to occur in the East Bay, followed by the South Bay, the North Bay, and San Francisco. By 2000, the East Bay and the North Bay are expected to have increased their shares of total housing within the region, while the percentages for the South Bay and San Francisco will have declined.

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- Housing in San Francisco is expected to maintain its desirability and its current role vis-a-vis other housing throughout the region. The desirability of the City's older housing and of many of its neighborhoods is expected to support continuing upgrading of the housing stock. Relatively more housing is expected to be added during the next 20 years than was added in the 1960s and 1970s. Prices and rents in San Francisco are likely to remain relatively higher than those for housing in many other parts of the region.

The ABAG forecasts of regional housing supply incorporate land use policies and development plans from all Bay Area counties. The following points (from Projections '83) indicate how each community's ability to supply housing was taken into account.

- "The development policies of the cities and counties are assumed to have a major effect on the type and extent of growth within the region." (p. 13)
- "Projections '83 assumes direct use of the local policy data for the period 1980-1990. In other words, current local policies concerning the amount of land with services available during this period were assumed to remain in effect until at least 1990. After 1990, current policies were assumed to continue to remain in effect in most areas, as the supply of land by type and intensity of use was sufficient to accommodate growth projected for these areas." (p. 17)
- "The projections for the long term, 1990-2000, assume that essential public services and infrastructure will be available to accommodate new development." (p. 17)

Regional Labor Force

As explained in the Downtown Plan Draft EIR, the future size and distribution of the labor force throughout the region (the residence pattern for the region's employed population) depend not only on the future supply of housing but also on demographic factors affecting the number of workers per household. Expected trends in labor force participation and household size (workers per household) were considered along with the housing forecasts in estimating the future distribution of employed residents throughout the region.

Labor force participation is expected to continue to increase, but at lower rates of growth than occurred in the past ten years. Most of the "baby boom" generation have already entered the labor force, and the

overall population is aging, so that those over 65 years of age will represent an increasingly larger share of the population in the future. Although the labor force participation of women has already increased substantially, additional growth is forecast for the future.

As a consequence of the expected increase in the average number of workers per household, the existing supply of housing becomes an important factor determining the residential distribution of the region's labor force. Counties with larger number of existing households are expected to accommodate more labor force growth from within the existing housing stock than counties with fewer existing households. In other words, housing development is not the only factor contributing to increases in employed residents.

The Downtown Plan Forecast as a Share of ABAG's Forecast of the Region

The forecasts prepared for the Downtown Plan Draft EIR of the regional distribution of employed residents and those published in ABAG's Projections '83 incorporate similar trends in population and labor force demographics. The Downtown Plan forecasts of the residence patterns of C-3 District workers were sensitive to the future growth of employment elsewhere in the region and the ability of the potential housing supply to accommodate this growth. The share of each county's labor force that would work in the C-3 District was monitored throughout the forecasting analysis.

Table R-1, p. 281 of this chapter shows the 1981 residence patterns for C-3 District workers and the forecast for the year 2000 as prepared for the Downtown Plan Draft EIR. The table also shows the 1980 Census distribution of employed persons throughout the region and the ABAG forecast for this distribution in 2000. In the last two columns, the Downtown Plan estimates of the residence patterns of C-3 District workers in 1981 and 2000 are shown as percentages of the total employed population in each part of the region for those years. C-3 District workers represent a relatively large share of San Francisco's labor force, and relatively small shares of the labor force in other parts of the

TABLE R-1: REGIONAL PERSPECTIVE ON RESIDENCE PATTERNS AND HOUSING, 1980/81 and 2000

	1980/81		2000		C-3 District Workers As A Percent of Total Employed Population 1980/81		C-3 District Workers As A Percent of Total Employed Population 2000	
	C-3 District Workers By Place of Residence	Employed Population (1980 Census)	C-3 District Workers By Place of Residence	Employed Population (ABAG Forecast)	C-3 District Workers As A Percent of Total Employed Population 1980/81	C-3 District Workers As A Percent of Total Employed Population 2000	C-3 District Workers As A Percent of Total Employed Population 2000	
San Francisco	154,000	342,000	189,000	404,000	45.0%	46.8%	46.8%	
East Bay (Alameda, Contra Costa, Solano, Napa)	66,000	953,000	110,000	1,407,000	7.0%	7.8%	7.8%	
Peninsula (San Mateo, Santa Clara)	32,000	975,000	48,000	1,326,000	3.3%	3.6%	3.6%	
North Bay (Marin, Sonoma)	18,000	247,000	29,000	393,000	7.3%	7.5%	7.5%	
TOTAL	270,000	2,517,000	376,000	3,530,000	10.7%	10.7%	10.7%	

NOTE: The forecasts of C-3 District workers living throughout the region were prepared for the Downtown Plan DEIR for the 1981-2000 period. The small number of workers who would live outside the region are not shown here. The 1980 data for the employed population in the region is from the U.S. Census. ABAG's Projections '83 includes forecasts of employed residents for all counties of the region for the 1980-2000 period. The differences in the base years introduce only minor inconsistencies in the comparison.

SOURCE: Recht Hausrath & Associates

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region. In 2000 as compared to 1980/81, C-3 District workers would represent similar proportions, with only small increases.

Because housing supply assumptions, as well as labor force and employment trends, are the basis for the forecasts, the above observation that the changes over time in the C-3 District percentages of the region's labor force in each area would not be large indicates that C-3 District workers would not require much larger shares of the region's housing in 2000 than they do now. In other words, a housing stock consistent with local policies as reflected in the ABAG forecasts could accommodate both future C-3 District workers and future workers elsewhere in the region. In 2000, the relationship between C-3 District workers and other workers competing for housing would be relatively similar to the conditions in 1980/81.

It should be noted that the numbers in Table R-1 do not represent a net addition of population, households, or the demand for housing. For both the Downtown Plan forecasts and the ABAG forecasts, the year 2000 totals incorporate several different types of changes expected within the Bay Area population. New workers will move into the region, some existing workers will move out of the region, other workers will retire or decide not to work, existing residents will change jobs or become employed for the first time, and households will split up and re-group as well as move within the region. The net changes incorporated in the forecasts reflect the expected outcome of all of the possible changes in working and living arrangements.

The text of the EIR Supplement is revised to provide more detailed discussion along the lines of this response. The following section replaces the third complete paragraph on p. 47 of the DEIR Supplement (EIR, pp. 131b-131d). Table 16A in the revised text replaces all except the first column of data in Table C-3, p. A-33 of the EIR. The remaining data of Table C-3 remains on p. A-33. [The reader should note that the following Table 16A (in the revised text) is somewhat different from Table R-1 incorporated in this response. Both show the same types of data. Table 16A in the revised text shows the regional perspective using the two cumulative analysis methodologies and, therefore, also uses 1984 for the base year.]

TABLE 16A: REGIONAL PERSPECTIVE ON RESIDENCE PATTERNS

	Downtown Plan Forecast of Residence Patterns of C-3 District Workers /a/				List-Based Forecast of Residence Patterns of Workers in Greater Downtown Area /b/							
	Number of Workers			Percent of Total Employed Population in Each Part of Region /c/		Number of Workers			Percent of Total Employed Population in Each Part of Region /c/			
	Total 1984	Total 2000	Change 1984-2000	Total 1984	Total 2000	Change 1984-2000	Total 1984 /d/	Total Future	Change from 1984 /e/	Total 1984	Total Future /f/	Change from 1984 /f/
San Francisco	159,000	189,000	30,000	45%	47%	56%	198,000	230,000	32,000	57%	57%	59%
East Bay	73,000	110,000	37,000	7	8	9	94,000	114,000	20,000	9	8	5
Peninsula	35,000	48,000	13,000	4	4	4	46,000	54,000	8,000	5	4	2
North Bay	19,000	29,000	10,000	7	7	7	27,000	33,000	6,000	10	9	4
TOTAL	286,000	376,000 /g/	90,000	11%	11%	10%	365,000	431,000	66,000	14%	12%	7%

/a/ Includes permanent employment and annual average construction employment. Incorporates changes in employment for office, retail, hotel and other uses.

/b/ There is no time frame associated with development of the projects on the list. This amount of space would probably be absorbed between 1990 and 2000. If all the projects on the list were built before the year 2000, there would be more development (not currently on the list) and thus more workers in the downtown area by that year. In this case, the percent of the regional employed population in 2000 would be higher than shown here.

/c/ Forecasts of employed residents in Bay Area counties from ABAG, Projections '83. ABAG presents forecasts of employed residents for 1985 and 2000. For comparability with the cumulative analyses (which use 1984 as the base year), ABAG's 1980 to 1985 projections were prorated over the five-year period to estimate 1984 conditions for the region.

/d/ The estimate of total employment in the greater downtown area includes 1984 C-3 District estimates from the Downtown Plan DEIR and order-of-magnitude estimates for the other downtown areas in that year, plus estimates of employment growth from the development of buildings on the list. See note /e/.

/e/ This estimate is based on all projects on the list except those included in the Downtown Plan DEIR 1984 base year estimate. The estimates of employment and residence patterns for projects on the list are based on data in the Transportation Guidelines, September, 1983.

/f/ The ABAG forecasts of employed population in each area of the region in 2000 are used for this calculation. As mentioned in note /b/, the projects on the list are likely to be built and occupied between 1990 and 2000. Therefore, by the year 2000, more projects (and thus more workers) could be expected and the percentages of the total regional employed population would be larger.

/g/ The Downtown Plan forecasts include some workers who would live outside the Bay Area. This is a small number and is not shown here.

SOURCE: Recht Hausrath & Associates

"Regional Perspective on Residence Patterns and Housing

"The residence patterns of San Francisco workers can also be considered from a regional perspective. Future labor force, housing, and employment throughout the region were important factors in the Downtown Plan residence patterns forecasts. Expected trends in labor force participation, workers per household, housing production, and employment growth provided the future regional context in which the Downtown Plan forecasts were prepared.

"Table 16A, p. 283 [of this chapter] presents residence pattern forecasts for C-3 District workers as prepared for the Downtown Plan Draft EIR and all alternative residence pattern forecasts for downtown workers using the March 10, 1984 list of downtown projects./25/ Both residence pattern forecasts are also shown as percentages of the total employed population in each part of the region, as forecast by the Association of Bay Area Governments (ABAG)./26/

"The Downtown Plan 1984 estimates and forecasts for the year 2000 (first three columns on the left) indicate that the largest number of C-3 District workers would live in San Francisco, followed by the East Bay, the Peninsula, and the North Bay. The largest increase of C-3 District workers would be for those living in the East Bay, followed by San Francisco, the Peninsula and the North Bay. The next three columns compare the Downtown Plan residence pattern forecasts for C-3 District workers to ABAG's forecasts of total employed residents throughout the region. C-3 District workers would represent a relatively large share of all employed San Franciscans and relatively smaller proportions of the labor force in other Bay Area counties. Comparing 1984 and 2000, there would not be major changes in the C-3 District percentages of the labor force in each area. The same conclusions would apply in the case of any of the five Alternatives to the Downtown Plan.

"The residence pattern forecast using the list of downtown projects leads to similar conclusions. In this case, the residence patterns for downtown workers do not consider changes over time in regional labor force,

housing, and employment./27/ The downtown workers estimated using this approach also represent a large share of both the totals and the growth of employed residents in San Francisco and relatively smaller shares of both the total and growth of employed residents elsewhere in the region. As in the case of the Downtown Plan forecast in 2000, there would not be major changes from the 1984 percentages showing downtown workers relative to the rest of the region's labor force.

"Because regional housing supply assumptions are one basis for the forecasts, the above observation that the changes over time in the C-3 District or downtown worker percentages of the region's labor force in each area would not be large indicates that C-3 District / downtown workers would not require much larger shares of the region's housing in the future than they do now. In the future, the relationship between C-3 District / downtown workers and other workers competing for housing in the region would be relatively similar to the conditions in 1984.

"In terms of the region's housing market, downtown development and employment growth would not, by themselves, have a major effect on the housing markets in other Bay Area counties or in the region overall. As a part of total regional employment growth to the year 2000, however, increases in San Francisco employment can be viewed as contributing to regional housing demand. A strong regional economy has been and will continue to be a factor supporting a competitive regional housing market with relatively high housing prices and rents."

The following notes are added after Footnote /24/ on p. 133 of the EIR (Supplement, p. 48):

"/25/ As explained earlier, there are several differences in the estimates of employment and residence patterns derived from these two approaches to cumulative analysis. The most important differences are apparent in the two employment estimates shown in Table 16A. The Downtown Plan employment total are smaller than the total employment estimates for the greater downtown area, primarily because the latter estimate covers the C-3 District, plus other areas such as the South of Market area, Civic Center, and the northern waterfront. The growth for this larger downtown area is smaller than the C-3 District growth, however, because the list of

downtown projects includes known projects, not all development likely to occur by 2000, and also does not incorporate changes in the use of existing space, such as increasing office employment densities.

"/26/ Association of Bay Area Governments, Projections '83. This report presents forecasts from 1980 to 2000 of population, employment, households and employed residents for each of the nine Bay Area counties.

"/27/ The distribution of downtown workers among the Bay Area counties is based on the residence pattern forecasts prepared for the Downtown Plan Draft EIR and on the Department of City Planning's Transportation Guidelines for Environmental Impact Review, September 1983."

Rental Housing Effects

COMMENT

"I remain amazed by DCP's EIR analysis policy, which is continued by [the 505 Montgomery Street DEIR Supplement], to ignore in 'Housing Impact' sections how a project's housing demand impact will be divided between rental and ownership housing in San Francisco, and within each of those two categories, among the various levels of 'affordability' - i.e. rent levels, purchase price levels, etc.

"It would be a bald-faced lie to say that the information needed to do this is not in hand. First of all, there is a huge amount of general background data in the recently revised Housing Element of the Master Plan and accompanying backup documents. Second, there is the information developed by the employee survey conducted for the Downtown Plan DEIR.

"The critical part of such an analysis is to compare the identified needs for rental housing at various rent levels and ownership housing at various price levels with the current housing market supply, and the new housing expected to be developed.

"Any honest comparison will show the vital information the virtually no new affordable rental housing is included in the 600-1,400 units of annual new supply envisioned by these DEIR's to offset project(s) demand, and not as much affordable ownership housing as needed. Instead, most new housing supply will be market rate housing which will meet perhaps only 25% of the demand generated by any one project (or up to a point all projects cumulatively).

"In the past, some EIR's did make these comparisons to various degrees (see 82.35E, pages 42-55), [Yerba Buena Center Second Supplemental EIR, Summary of Comments and Responses], which are incorporated in these comments in toto by this reference. They generally validated the comment in the preceding paragraph.

"Ignoring the mismatch between demand due to office projects like [this one] and all their cumulative brethren and the City's housing market supply, both on-going and by result of new housing development (less housing losses to all causes), make it easy for these DEIR's and Supplements to totally ignore the issue of the displacement of lower-income households that will inevitably result as the new office development employees compete with them for the inadequate supply of affordable rental housing in San Francisco.

"This must be fully and honestly disclosed.

"You are not fooling those of us who are involved in housing issues, of course. It is the intent, we know, of the Department to conceal as much as possible from the general public the full displacement impacts of the continued development of such office projects as these upon lower-income San Francisco families and individuals. By doing so, it is the intent of the Department to permit those approving such projects, including the Planning Commission, to conceal from the public their true values, that is, their lack of priority concern for avoiding the displacement of such households, so that they may avoid being held accountable for those actions as is the underlying theory of representative government.

"What surprises me is not that the Department is so committed to ramming through office growth in San Francisco no matter how many folks get pushed out - that's been the hardball political game here ever since Joe Alioto got hold of YBC. What surprises me is that someone, I don't know who, is so dumb to think they can get away legally with it via the ridiculous phony smokescreens thrown up in EIR's like [this one], not to mention the Downtown Plan [Draft] DEIR." (John Elberling)

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RESPONSE

The cumulative housing impact section of the 505 Montgomery Street EIR (pp. 130a-131b -- Supplement, pp. 43-48) and the housing impact section of the Downtown Plan Draft EIR state that continued employment growth would have impacts on San Francisco's housing market. These sections state that there would be effects on the prices and rents for housing in San Francisco and discuss the implications of these effects on residents of the City. These impacts are not ignored or concealed and there is no intent on the part of Department of City Planning staff to conceal housing impacts. In fact, the impact analysis agrees with the commentor that continued employment growth would result in increased competition for available City housing, that the housing market would be unable to produce an adequate supply of affordable housing in San Francisco, and that the resultant market pressures would have most effect on those with relatively fewer financial resources and less ability to compete for housing (see Downtown Plan Draft EIR, p. IV.D.77-IV.D.81 and p. 131a of the EIR).

The comment requests that certain data be included in the cumulative housing impact sections. While the information requested was input into the identification of impacts, it does not, by itself, describe the impacts of employment growth on the housing market in San Francisco.

Further explanation of this approach is provided in the sections which follow:

Residence Patterns Are Quantified; Housing Market Implications Can Not Be

The Downtown Plan Draft EIR and the DEIR Supplement provide forecasts of future residence patterns of C-3 District workers. These forecasts identify the number of workers expected to reside in San Francisco, as well as in the other counties of the region. These numbers are useful in considering how San Franciscans would share in downtown employment growth,

in undertaking transportation analysis, and in considering impacts on the housing market. Residence patterns, by themselves, do not describe impacts on the City's housing market.

The Downtown Plan Draft EIR (p. IV.D.71) and the 505 Montgomery Street EIR (pp. 131-131b -- Supplement, pp. 46-47) also address housing market implications (as separate subsections following the discussion of residence patterns). These subsections consider whether employment growth would have effects on overall housing prices and rents and then address the implications of such effects. These impacts are described, but cannot be quantified for a variety of reasons. While it is possible to conclude that there would be increased competition for housing as a result of employment growth and that this competition would contribute to upward pressure on housing prices and rents, it is not possible to quantify the expected difference in prices/rents in dollars. Further, while it is possible to identify the different implications of a more competitive market with higher prices/rents, it is not possible to identify how many households would be affected in each of the ways identified. The fact that the housing market implications are not quantified does not mean that they are ignored or that their significance is minimized.

Conclusions About Housing Market Impacts

The points listed below highlight the conclusions in the Downtown Plan Draft EIR relevant to the questions about housing market impacts raised in this comment. (See also that Draft EIR, pp. IV.D.71 - IV.D.82 and pp. I.1 - I.8.) These conclusions are also the basis for the summary in the 505 Montgomery EIR (see pp. 131-131b).

- With continued employment growth, there would be more people with preferences for San Francisco housing and with greater financial resources to pay for housing. This additional demand for housing would be added to an otherwise competitive market.

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- The supply of housing is expected to be expanded in San Francisco. However, the private market is currently unable to directly produce an adequate supply of affordable housing. This situation is expected to continue.
- As a result of a number of demand and supply factors, there would be increased competition for available housing units. Initially, there would be increased competition for housing of the types and at prices/rents preferred by the additional worker households. Over time, there would be a series of market interactions whereby consumers make housing choices depending on what they are willing and able to pay for products of various types. As a result of these interactions, and of the market's ability to supply new units, the increased competition would eventually affect other segments of the housing market.
- Increased competition relative to supply would be greatest for housing priced below average, particularly for units below the threshold prices/rents for new housing productions. This is because the demand for these units would increase while the supply is likely to be reduced.
- With increased competition in an already competitive market, with the relatively high threshold for new construction, and the large pool of consumers with preferences for the older housing stock in San Francisco, more housing consumers would be attracted to housing which could be secured initially at below average prices and where investments could be made to upgrade the units. While this type of upgrading would increase the supply of units in one price range (thereby releasing competitive pressures in this segment of the market), it would reduce the supply in the lower price range (thereby increasing the competition for remaining units in those categories). At the same time, increases in the number of consumers demanding housing in the lower price ranges would further increase the competition for the available supply of units of these types.

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- As a result of increased competition for available housing, prices and rents would be higher with continued employment growth than without it. How much higher depends on the future of other factors (such as interest rates and the availability of financing) and cannot be easily quantified. Generally, continued employment growth at the levels reflected by the Downtown Plan Draft EIR forecast or by the Cumulative List could contribute to a situation in the future where housing prices and rents are moderately higher, on average, than current levels. At a minimum, employment growth is likely to be one of the factors which keep prices and rents at their current levels, in constant dollars.
- A more competitive City housing market with higher prices/rents would affect the type and quality of housing that can be purchased or rented for various prices and rents, the share of financial resources devoted to housing, and the extent to which housing needs and preferences are met. Over the long term, it could also affect the mix of types of residents in the City.
- Different households would be affected in different ways. There would be people who decide not to move into the City and existing residents who would eventually move out of the City for more acceptable housing elsewhere. There would be many individuals who continue to live in San Francisco and pay higher prices/rents for City housing. Still others, who are unable or unwilling to pay more, would accept housing which does not meet their preferences or needs. And finally, there would be owners of existing units who would benefit to the extent that their housing appreciates. It is not possible to quantify how many households would be affected in each of these ways.
- Generally, those households with fewer financial resources available to pay for housing would make the most sacrifices in adapting to more competitive market conditions. They would have less ability to compete for housing and fewer options available to them. San Francisco currently has and will continue to attract a large

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number of persons who would be faced with these difficulties in securing housing.

The items above highlight conclusions of the housing analysis relevant to the questions raised in this comment. The points above do not focus on the process whereby employment growth has effects on the housing market. Thus, the points do not describe all of the reasons behind the conclusions identified. The commentor is referred to the first section of Appendix I in the Downtown Plan Draft EIR (pp. I.1 - I-8.) which describes the relationship between employment growth and the housing market and explains why various effects are expected.

"Housing affordability" is an important aspect of the conclusions above about housing market impacts: Additional demand for housing in San Francisco because of employment growth would include workers who would not be able to afford much of the housing available on the market and who would be seeking housing at prices and rents below those of new housing added in the City. In other words, downtown workers would add to an already large group of consumers seeking housing with relatively lower prices and rents, the supply of which would not be expanded by the private market. This would increase the competition for available units of these types.

Employment growth would also add persons to an already large group of consumers who, although they might be able to afford some of the new housing built, would prefer older housing in the City's neighborhoods which, to them, would provide greater value for the prices/rents paid. Older housing which could be upgraded would be particularly attractive to this group. As this type of upgrading occurs, it would increase the supply of units in one price range and reduce the supply in the lower price range. In many cases, this would reduce a supply that can no longer be expanded by the private market. Similar to the first point above, this would reduce the options for the consumers in the lower ranges of prices/rents and would increase the competition for the remaining units.

The description of housing impacts above and in the text does not use the term "displacement." The reason is that there could be confusion about the meaning of the term such that it would imply different effects to different readers. Instead, the specific ways in which households could be affected are described, some of which might be considered as displacement and others of which would not.

For example, when faced with higher housing prices/rents, households which end up with housing which does not meet their preferences or needs might be considered to be "displaced." In many situations, it could be difficult to determine whether a household had no choice but to accept lower-quality housing or whether there was a decision made to forego other expenditures, to allocate more resources for housing. While displacement might be used to refer to households with no choice but to occupy housing that is below the standard that they would otherwise occupy, displacement might not seem appropriate for those who are similarly housed, but through choices of their own. Further, confusion could also arise because displacement may mean eviction to some people but not to others. There could also be questions about whether it means displaced from San Francisco, displaced from housing at a standard that one would otherwise be able to occupy, or displaced from housing that one previously occupied. The fact that the term "displacement" is not used is not meant to conceal or minimize the importance of housing impacts.

Data Requested Does Not Describe Housing Market Impacts

The demographic and household characteristics of downtown office workers and the issue of housing affordability were among the factors considered in the Downtown Plan Draft EIR housing analysis and residence patterns forecasts. The data requested in this comment relate to these considerations. Specifically, the comment requests that data be provided which distributes office workers between rental and ownership housing and among purchase price and rent levels. It also requests a comparison between this distribution and the price/rent characteristics of the housing supply.

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The data requested are not included in the text for two reasons. The main reason is that they do not describe conclusions about housing market impacts. The information requested would show that many office workers could not afford much of the housing currently on the market. Further, it would show that the prices/rents of newly built housing are likely to be above those indicated as affordable to many office workers. The impacts which are described in the text address the market-wide implications on all housing consumers of how the office workers "resolve" their housing problems and actually end up being housed. The data requested would not describe these implications.

Secondly, although the information requested could be developed, it would be based on simplified assumptions about several of the factors involved. Further, the housing affordability characteristics that the data would reflect would not necessarily be those that would apply in the future. Because of the difficulties involved in attempting to quantify housing affordability, the important conclusions from the data were identified in the analysis and have been summarized qualitatively in the text.

The comment suggests that data from the recently revised Housing Element of the Master Plan could provide the requested information. Although the Housing Element presents an analysis of the affordability of newly constructed housing units, it does not contain data for downtown office workers and cannot be used to provide the information requested. That affordability analysis demonstrates that the private market is currently unable to produce an adequate supply of affordable housing and supports the conclusions summarized above. This information concerning affordability, the identification of housing opportunity sites, and other sections of the Housing Element were used in the housing analysis for the Downtown Plan Draft EIR.

The material referenced on pp. C&R 42-55 of the Second Supplement to the Yerba Buena Center EIR (82.35E) does not contradict any of the information provided in this (505 Montgomery) EIR, nor does it amplify the conclusions reached. That material, in summary, provides: 1) a cumulative housing analysis somewhat similar to that provided in the residence patterns

portions of this EIR; 2) a discussion of displacement which concludes that many factors influence the displacement of low-income households but that there is no evidence of a direct causal relationship between office development and any displacement of low-income households (sources cited in YBC EIR); and 3) a discussion of housing affordability that concludes that it is not possible to quantify affordability, as is explained in this response.

The text of the 505 Montgomery DEIR is revised to provide more detailed discussion of housing market implications, in light of the response to this comment. The following text replaces the section beginning under "Housing Market Implications" on p. 46 of the DEIR Supplement and continuing through the first complete paragraph on p. 47 (pp. 131-131a of the EIR):

"Housing Market Implications/24/

"With continued employment growth, there would be more people with preferences for San Francisco housing and with greater financial resources to pay for housing. This additional demand for housing would be added to an otherwise large group of consumers with preferences for City housing.

"The supply of housing is expected to be expanded in San Francisco. However, the private market is currently unable to directly produce an adequate supply of affordable housing. This situation arises from a number of national, regional, and local factors and is expected to continue.

"There would be greater competition for available housing units with employment growth than without it. As a result of increased competition, housing prices and rents would be higher with continued employment growth than without it. How much higher depends on the future of other factors (such as interest rates and the availability of financing) and cannot be easily quantified. Generally, continued employment growth at the levels reflected by the Downtown Plan Draft EIR forecast and the cumulative list could contribute to a future situation where housing prices and rents are

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moderately higher, on average, than current levels. At a minimum, employment growth is likely to be among the factors which keep prices and rents at their current levels, in constant dollars.

"A more competitive City housing market with higher prices/rents would affect the type and quality of housing that can be purchased or rented for various prices and rents, the share of financial resources devoted to housing, and the extent to which housing needs and preferences are met. Over the long term, it could also affect the mix of types of residents in the City.

"Different households would be affected in different ways. There would be people who decide not to move into the City and existing residents who would eventually move out of the City for more acceptable housing elsewhere. There would be many individuals who continue to live in San Francisco and pay higher prices/rents for City housing. Still others, who are unable or unwilling to pay more, would accept housing which does not meet their preferences or needs. And finally, there would be owners of existing units who would benefit to the extent that their housing appreciates.

"Generally, those households with fewer financial resources available to pay for housing would make the most sacrifices in adapting to more competitive market conditions. They would have less ability to compete for housing and fewer options available to them. San Francisco currently has and will continue to attract a large number of persons who would be faced with these difficulties in securing housing."

FISCAL FACTORS

Transit Operations and Maintenance Funding

COMMENTS

"WILL MUNI AND OTHER TRANSIT AGENCIES HAVE THE FINANCIAL CAPABILITY TO EXPAND AS PROPOSED?

"The [Downtown Plan Draft] EIR analysis assumed future transit capacities would expand according to the proposals of transit agencies. However, some of the capital expansion proposals of these agencies are competing for the same federal funds allocated by the MTC, and the MTC is competing nationally against many municipalities for these same funds. There is therefore no assurance that federal funding will be forthcoming for these proposals.

"For instance, the [Metropolitan Transportation Commission] MTC December, 1983 'New Rail Starts and Extensions, Staff Recommendations' gives a range of from \$356 million to \$635 million available for capital improvements for the Bay Area in the 1983-88 five year period. However, page 34 of this report states that 'the lower end of the range is optimistic and assumes a good competitive position for the region. The upper end of the range would require an expanded Federal program.' In other words, it is unrealistic to assume even the lower number of \$356 million will be available for Bay Area transit systems in the next 5 years.

"Attached is Table 4, page 15, of the MUNI FY 84-88 Capital Improvement Program. It shows that there are 628 million dollars of proposed capital improvements from 1984-88. Also attached is a copy of Table 8 from this document showing that a best case deficit of 105 million dollars and a worst case deficit of 406 million dollars over the next five years in actually funding the 628 million dollars in proposed capital improvements. In other words, the money for these improvements does not exist. As noted by the MTC quote in the preceding paragraph, however, even the 'worst case' may be optimistic.

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"It is therefore necessary to know (1) the costs of the capital expenditures and the operation and maintenance expenditures of the transit improvements necessary to accommodate new development and (2) the likelihood of federal or state grants to assist in the payment for these improvements."

The [Downtown Plan Draft] EIR should explain what is meant when it states that 'future transit capacities were made on the basis of proposals contained in the current five-year cycle of Five-Year Plans.' Does the Downtown Plan EIR assume the Five-Year Plans would be fully funded? Specifically for MUNI, did the [Downtown Plan Draft] EIR assume the 628 million dollars of capital improvements listed in Table 4 of the MUNI FY 84-88 Capital Improvement Program would be funded?

"As can be seen from this table, many of the capital improvements proposed by the MUNI Five Year plan agencies have Federal and state funds assumed for these improvements. To the extent Federal and state funds are not forthcoming for the improvements as proposed by MUNI what effect will this have on the transit, traffic, and parking analyses of the Downtown Plan EIR? This same question should be answered for other transit agencies.

"If there are any Federal or State grants for operation and maintenance of transit systems, will the proposed increases in the capacity of MUNI and other transit systems increase the amounts of these grants in future years according to existing grant formulas?

"Given the unsure nature of funding for future transit systems, the Downtown Plan EIR should include a worst case 'limited transit action' scenario which presumes limited federal or state funding. This scenario should describe the effects on transit systems, traffic, and automobile use if the transit proposals of transit agency Five-Year Plans are not implemented.

"The [Downtown Plan Draft] EIR should summarize in a table the number and cost of additional MUNI transit vehicles necessary to accommodate additional downtown development for the years 1990 and 2000 and the operation and maintenance costs to run these vehicles in 1990 and 2000. In addition, this table should list the cost of additional car barns and other capital

improvements necessary to utilize the additional transit vehicles (such as the MUNI Metro turnaround). Attached is an example of the table [xx] which should be filled out for each transit agency.

"The Downtown Plan EIR should also summarize in a table the same type of information requested . . . above for other Bay Area transit agencies. This should be put in the same format as for MUNI information.

"The Downtown EIR should indicate the total dollar value of transit improvements assumed to occur by 1990 and 2000 to accommodate the 100,000 additional workers in the downtown San Francisco area. How many dollars per new worker is the cost of these improvements?

"The Downtown Plan EIR assumes that transit agency proposals contained in their Five-Year Plans will be implemented. The EIR should indicate the extent to which past transit agency plans have been implemented and indicate the potential for implementation of the proposals in current Five-Year Plans."
(David Jones)

"Page 8 [of the Supplement] states that '...planned transit service improvements have been assumed to be implemented ...'. Please summarize them and the costs associated with their implementation." (Carl Imperato)

"FUNDING FOR MUNI OPERATIONS AND MAINTENANCE

"The [Downtown Plan Draft] EIR states that, for MUNI: 'It appears likely that capital projects would be fully funded, whereas funding for operational expenditures would be uncertain in the future.' (p. J.25)

"What assumptions were made regarding the funding source of these improvements? What is meant by fully funded? Does this mean fully funded with federal funds? Similarly, does the uncertainty of future operational funding mean uncertain federal funds?

"

TABLE xx: COST OF TRANSIT IMPROVEMENTS TO ACCOMMODATE NEW C-3 DISTRICT COMMERCIAL DEVELOPMENT

TRANSIT SYSTEM: _____

	<u>1981</u>	<u>1984</u>	<u>1990</u>	<u>2000</u>
A. Transit Capacity: (Peak P.M. Hour)				

B. Additional Capital Improvements:

<u>Improvement</u>	<u>Cost</u>	<u>Additional Capacity Provided</u>	<u>Proposed Funding Source</u>	<u>Is Funding Definite</u>	<u>Completion Date</u>
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of buses
by 1990

of trolleys
by 1990

of LRVs
by 1990

Oper. & Main.
costs in 1990

System Improve-
ments by 1990

Metro Turn.
Car Barns

of buses
by 2000

of trolleys
by 2000

of LRVs
by 2000

Oper. & Main.
costs in 2000

System Improve-
ments by 2000

Metro Turn.
Car Barns

"If federal funds appear likely, what is the basis for the likelihood of these funds? Are there current commitments to give San Francisco MUNI these funds?" (David Jones)

"On page 19 [of the Supplement]: discuss the costs associated with the transit capacity improvements assumed." (Carl Imparato)

RESPONSE

Details of transit funding are not properly a subject for an EIR on an individual building in downtown San Francisco, pursuant to CEQA and the State CEQA guidelines. Transit finance is a very complicated and specialized topic that is most appropriately handled by the expert agencies as part of their operational activities. Although not required, a general response to fiscal comments is provided below.

The Metropolitan Transportation Commission (MTC) disburses its share of federal and state transportation monies throughout the Bay Area. Much of the money MTC receives is allocated to MTC by the federal or state government pursuant to a formula based, in part, on the level of service provided in the region. Data from the San Francisco Municipal Railway (Muni) shows that Muni provides for more passengers per revenue mile than most other systems in the country, and therefore provides MTC with a strong basis for need which has allowed a relatively large percentage of federal funding to be allocated to the Bay Region under federal granting formulas. MTC has in the past been successful in collecting as much as 8% of the nation's allocation of transit funds. It is not unrealistic to assume MTC will continue to be successful in its applications for the "New Transit Rail Starts and Extensions Program" cited in the comment and for other state and federal funding. This program, however, does not include projects which will materially increase Muni's total capacity, although it would meet some of the demand generated by new downtown office development. Those few Muni projects included are primarily to develop plans to improve operational efficiencies and to expand the service network.

VIII. Summary of Comments and Responses

It is prudent, as MTC has noted, to be aware that the entire regional funding package might not be granted. For this reason, MTC establishes priorities for receipt of funds granted. However, the Downtown Plan Draft EIR analysis of future transit capacities and impacts does not assume that any of the new rail starts proposed by MTC would be implemented.

Therefore, if any of the Muni priorities in the New Rail Starts Program are funded by MTC, transit impacts would be less than those described in the Downtown Plan Draft EIR, to the extent that the projects increase Muni's peak-period capacity. A summary explanation of transit funding can be found in "Public Transit Financial Resources Available to San Francisco Bay Area Operators," Attachment C of an analysis entitled "The Financial Feasibility of Public Transit Recommendations in the San Francisco Downtown Plan" (February 1984), prepared by A. Lee Knight, a former financial expert for MTC.

Although the Muni's Five-Year 1984-88 capital improvement program includes some items expected to be funded by the Rail Starts Program or the I-280 Interstate Transfer Program, those items were not included in the Downtown Plan Draft EIR assumptions. The analysis assumed only the items that have existing or committed funding from federal, state or local sources and are not dependent on the City's receiving the entire \$628 million shown in Table 4 of Muni's 1984-88 Capital Improvement Program. Therefore this presents a worst-case impact analysis, since it is likely that funding will be available to sustain existing programs. Funding to expand capacity and to operate that expanded capacity is MTC's lowest priority, and funds for such purposes are unlikely to be available through MTC, with the exception of the New Rail Starts projects. Muni is likely to rely on local revenue sources to expand its capacity: San Francisco has used \$21 million from its General Fund to keep Muni's expansion on schedule. This has allowed San Francisco to apply to and receive funds from MTC to operate and maintain its newly enlarged existing and committed system.

It is not appropriate to look to previous Muni Five-Year Plans for evidence of the extent of implementation of Five-Year Plan proposals because we are just reaching the end of the first five-year cycle. The

implementation record from only one cycle, especially based on the first Plan which was very general in nature, does not provide enough experience to allow projection of future implementation possibilities.

To the extent that Federal and State funding may not be sufficient to finance needed expansion, the City does have other revenue sources, such as bonding capacities and the Transit Impact Development Fee system. Although the Transit Impact Development Fee ordinance is still in litigation, the program is being implemented and money collected is being placed in an escrow fund. This fee system was developed to provide the additional Muni services needed to serve the downtown, based in part on transit demand analyses prepared on the basis of survey information compiled in connection with the Downtown Plan Draft EIR. The fee is subject to a legislative ceiling of \$5.00 per sq. ft., although the additional Muni services would cost over \$8.00 per sq. ft. of new downtown office space. The fee was not designed for 100% cost recovery. To the extent that any of the MTC's New Rail Starts program is funded and does expand Muni's capacity to carry downtown passengers, that program could mitigate the Transit Fee shortfall.

The monitoring program described on p. 250 of this chapter and included in the Downtown Plan (p. 131) is intended to provide ongoing cross checks to be sure service meets at least the worst-case assumptions shown in the 505 Montgomery Draft EIR and in the Downtown Plan Draft EIR.

The detailed cost and funding information requested for Muni and other regional transit agencies is not appropriate information to include in an EIR on a single development project which is a small portion of the overall development that may occur in the region. The information requested is more detailed than appropriate for future transit funding projections, which must of necessity be somewhat speculative. In addition, the premise of the table is inappropriate: funding sources are never absolute until work on a project is ready to start; many improvements are designed to serve the entire system, and not only the C-3 District. It is not appropriate for purposes of the Downtown Plan and its EIR to segregate peak needs of the C-3 District from the entire system

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needs. To assume all major capital improvements are intended solely for downtown would attribute too much of the total cost to one single area of the City. The citywide system is inherently flexible and is continually adjusted to maximize service.

Ultimately, of course, future transit funding is based on local and regional political actions which are impossible to predict. To the extent that local and regional policies continue to support "transit first," cumulative transit resulting from downtown development will be as described in the EIR or better.

NOTES - Employment, Housing and Fiscal Factors

/1/ Stephen B. Savin, The Empire Group, letter, February 1, 1984.

/2/ Copies of the tenant survey responses are on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister St., Fifth Floor. The survey was conducted by Environmental Science Associates (ESA) in February 1984.

PUBLIC SERVICES

WASTEWATER TREATMENT

COMMENT

"We have reviewed the subject draft EIR and feel it is inadequate due to the fact that it does not include any discussion of the treatment and disposal of sewage that will be generated by the proposed project.

"This discussion should include the projected volume of waste that will be generated and an assessment of how that volume might affect the design capacity of the sewage treatment plant providing treatment." (Richard Whitsel)

RESPONSE

The Initial Study for the project discusses utilities and public service effects, including wastewater flows. (See p. A-16 of the EIR.) On the

basis of the information in the Initial Study, public services and utilities were found to require no further environmental analysis, as stated on p. 48, paragraph one, and p. A-7 of the EIR.

SOLID WASTE

COMMENT

"The California Waste Management Board has no jurisdiction over the development of commercial or industrial office development; however, the Board is deeply concerned with solid waste generation associated with growth areas in California. Consequently, we recommend including a discussion of solid waste management when preparing the final EIR.

"In order to assess the cumulative impact of development on local solid waste facilities, the following information should be provided and considered:

"Environmental Setting

- "- A brief description of existing solid waste facilities, including collection, transfer, and method of disposal.
- "- The location, capacity and life expectancy of available landfills.

"Environmental Impacts

An estimated volume of waste material expected to be generated by the project, based on the proposed employee population projections. General purpose office facilities surveyed have generated 1.55 lbs./capita/day of mixed waste. Of this .51 lbs. is white ledger paper which is economically recyclable. Computer oriented operations may generate additional computer card and computer print out paper of high recyclable value.

VIII. Summary of Comments and Responses

"Mitigation Measures

- "- A brief discussion of local plans for developing future disposal sites.
- "- The Board encourages the reduction of solid waste through local recycling policies and resource recovery programs." (Odis Marlow)

RESPONSE

As discussed in the response to the comment above on Wastewater Treatment, on the basis of the information in the Initial Study, project effects on public services and utilities, including solid waste disposal, were found to require no further environmental analysis in this EIR, as stated on p. 48, paragraph one, and on p. A-7 of the EIR. The Initial Study estimated that the project would generate about 320 pounds of solid waste per day.

The Downtown Plan Draft EIR (pp. IV.F.1-IV.F.2 and IV.F.8-IV.F.10) discusses existing solid waste generation in the C-3 District, existing and projected disposal facilities and cumulative demand for solid waste disposal. The Downtown Plan Draft EIR estimates that cumulative solid waste generation from the C-3 District would increase about 13% from 1984 to 1990, to about 88,000 tons per year, and 8% from 1990 to 2000, to about 95,000 tons per year (p. IV.F.10). About 10% of the City's waste stream is currently recycled. The San Francisco County Solid Waste Management Plan (Final Draft, September 1982) calls for pursuit of additional landfill capacity, and an emphasis on building a Resource Recovery Facility.

The following sentence is added to Chapter I., Project Description, p. 20 of the EIR, after the first sentence of the second paragraph.

"Separate storage facilities for reusable material would be provided."

MITIGATION MEASURES

URBAN DESIGN

COMMENT

"Page 7, Paragraph 2 . . .: the Board does not believe that retention of 2 out of the 10 buildings can be considered a mitigation [measure] for altering the scale of this block." (Jonathan Malone)

RESPONSE

The first mitigation measure on p. 7 is revised to read as follows:

- "- The project would retain two buildings on the site, 638-640 Sacramento St. and 653-655 Commercial St.; these would maintain the scale of development for these two lots on Commercial and Sacramento Sts."

The first mitigation measure on p. 137 of the EIR is revised as follows:

- "- The project would retain and refurbish two existing low-rise, older office buildings with ground-floor retail uses, at 638-640 Sacramento St. and 653-655 Commercial St., which would maintain the low-scale, pedestrian oriented uses of Commercial and Sacramento Sts. on these two lots. (Existing tenants of these buildings would not be displaced.)"

TRANSPORTATION

Transit Impact Development Fee

COMMENT

"-P. 138 Mitigation: The sponsor says he will only contribute mitigation for MUNI if the court upholds the Transit Impact Development Fee. That fee as

VIII. Summary of Comments and Responses

administered by the Board of Supervisors only accounts for about 55% of the actual costs that the project will add to MUNI. The sponsor should, voluntarily, agree to pay mitigation for the full costs as determined in the yearly report by the PUC, since the sponsor agrees that those costs do exist and are significant. Failing that, the \$5 per sq. ft. should be paid up front." (Bruce Marshall)

RESPONSE

The project sponsor has agreed to the mitigation measure on p. 138, paragraph one of the EIR. As stated in that measure, the sponsor would participate in equitable measures to fund transportation service proportional to demand created by the project. The project sponsor does not propose to participate in such funding in the absence of legal mechanisms which would apply to all projects which are similarly situated.

Sutter-Stockton Garage, Effects on Chinatown

COMMENT

"I think this Commission is going to have to consider somehow getting the Parking Authority to figure out different routing patterns for the Sutter-Stockton Garage, but you are never going to address it when you address piecemeal mitigation measures like this. Because as long as the Sutter-Stockton Garage puts any traffic into Chinatown rather than into the Retail District, you are exacerbating the problem. But where does it come up? It comes up nowhere. You don't even think of that one as an alternative. Maybe you haven't gotten stuck in that traffic. I have. And that is the first time I thought of it." (Sue Hestor)

RESPONSE

The EIR on the proposed Addition to the Sutter-Stockton Garage, 82.313E, was certified on May 17, 1984. That DEIR, and the Summary of Comments and Responses, examines four alternative routing patterns for Sutter-Stockton

Garage traffic. The City Planning Commission will consider those alternatives and their potential implementation as part of its review of that project.

Pedestrian Movement

COMMENT

"Where are your mitigation measures that remove all of the news racks? Some of -- pardon me -- the 'street trees' in those enormous planter boxes, or at least relocate them so they aren't obstructions. To redo all of the street furniture because your pedestrian capacities on the sidewalks are -- well, are misleading. I was going to use a much stronger word. Because you presume that there is sidewalk there, and there isn't sidewalk there, folks. I walk that area. And it's a myth. If you have theoretically a ten-ft. wide space, the reality is, for large sections, you will have a three-ft. wide space, and you have all of these funnels all over the place, and the pedestrian capacity is zilch.

"And the Planning Commission is avoiding the mitigation measures that you really have to start thinking about. You are going to have to go to war on all of the newsracks. You are going to have to go to war on a lot of those ornamental trees which meet one of your other policies, because you can't move the people any more." (Sue Hestor)

RESPONSE

Page 139 of the EIR includes the following transportation mitigation measure proposed as part of the project: "The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic. Bus shelters would be incorporated into the building site plan providing adequate lighting, seating, garbage receptacles and other such amenities as a newsstand or phone booths, if such structures are consistent with maintenance of adequate pedestrian flows."

VIII. Summary of Comments and Responses

The project proposes to widen the Montgomery St. sidewalk along the project frontage by one foot, as noted on p. 20 of the EIR, and to improve the Commercial St. frontage as a pedestrian-oriented street consistent with the Center City Pedestrian Circulation and Goods Movement Study recommendations, which is discussed on p. 139 of the EIR.

These measures would respond to Policies 1 and 2 of Objective 2 of the Transportation Element of the San Francisco Master Plan, which are to "Provide for sufficient pedestrian movement space", and to "minimize obstructions to through pedestrian movement on sidewalks in the downtown core," respectively. The Element (p. 43) also contains specific guidelines for location and design of newspaper vending machines, flower stands, and street trees, which would be followed in the project design.

Cumulative Traffic Effects

COMMENT

"I would next direct your attention to the mitigation measures and point out -- and that starts out on p. 136 -- that one of the problems that you have with the mitigation measures is that they're incredibly site specific. And they are not at all in this EIR nor are they in any other EIR dealing with the cumulative problems that are being created. The cumulative problems of traffic on Stockton St. The cumulative problem of traffic on Montgomery St. I mean, I will give you some mitigation measures that I think this Commission has to consider.

"And you are going to have to deal with some incredibly serious traffic mitigations. And all this doesn't -- it's casting a mere ripple in the pond. These mitigations don't address the cumulative problems." (Sue Hestor)

RESPONSE

The DEIR Supplement, p. 31, adds the following mitigation measure, concerned with cumulative transportation effects, to p. 141 of the EIR:

VIII. Summary of Comments and Responses

"The City could adopt and implement the transportation improvements described in the Downtown Plan. Should the Downtown Plan not be implemented, the City could act to implement the transportation mitigation measures described in Section V.E, Mitigation of the Downtown Plan Draft EIR. The Downtown Plan is presently under review: action on the Plan is expected by the City Planning Commission during summer 1984. If approved by the Commission, some of the Implementing Actions would need approval by other decision makers, as described in Section V.E of the Downtown Plan Draft EIR."

Cumulative Transit and Parking Impacts

COMMENT

"Mitigation measures should be imposed on development which would bring service levels back up to the year 2000 pre-cumulative development levels and/or pay for the full cumulative capacity and operating costs associated with implementing the Level of Service improvements which have been absorbed by cumulative development. Please provide this data, examine the costs, and propose and impose those mitigation measures.

"Regarding mitigation measures: how much would it cost to bring Levels of Service on transportation corridors back to present day levels? (For example, what monetary payment to motorists would provide sufficient incentive for them to stay off the roads?) This is one measure of the minimum cost of transportation system mitigation which should be imposed on development.

"Please develop the mitigation measures necessary to eliminate the parking deficit projected for cumulative development." (Carl Imparato)

RESPONSE

The Downtown Plan Draft EIR presents transportation mitigation on pp. V.E.1 to V.E.30. Those mitigation measures included suggestions that would add transit capacity and encourage ridesharing to reduce the transportation impacts (including parking impacts). The DEIR Supplement,

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on p. 31 (EIR, p. 141), includes a mitigation measure that incorporates the mitigation measure in the Downtown Plan Draft EIR. Because the City has direct control over a very limited portion of the mitigation measures, its ability to impose far-reaching conditions on individual projects is limited. The Transit Development Fee is one major measure that the City is taking to help improve transit services within its control. To the extent that the City endorses and supports measures not directly under its control, it adds to the probability of such measures' being implemented.

To suggest that some equivalence exists between the cost of providing transportation improvements and the perceived costs of an individual's commute is highly misleading. The range of individual perception is sufficient to bias this approach. Commute "costs" may be seen as no more than bridge tolls and 15 minutes of delay at a toll plaza. Similarly, the person willing to drive alone through intense congestion may not be willing to ride in a packed BART car for any amount of subsidy.

The goals of the Downtown Plan transportation section, which could be met through implementation of all of the transportation mitigation measures in the Downtown Plan Draft EIR, would essentially maintain commute auto traffic at present levels and thus, the long-term parking demand would not increase.

AIR QUALITY

COMMENT

"Regarding air quality impacts: What is the cost of removal (based on the most cost-effective air pollution tradeoffs available) of the additional emissions which would be generated by cumulative development? This should be the standard used for imposition of air pollution mitigation measures on development. Please include such measures." (Carl Imparato)

RESPONSE

The cost of removal of the additional air pollutant emissions generated by cumulative development would be impossible to quantify without a major research effort. Such emissions could be reduced indirectly by mitigating traffic impacts, energy impacts, and housing impacts. These measures would be under the jurisdiction of local agencies; the associated costs would be those of increasing roadway capacities, expanding transit services and implementing ride-sharing measures, installing energy conservation features in building construction, and developing housing in San Francisco instead of elsewhere in the region. Emissions could also be reduced directly, by imposing more stringent emission controls on new vehicles or retrofit requirements on existing vehicles. These measures would be under the jurisdiction of state and federal agencies; the associated costs would be those of designing and equipping vehicles with additional emission-control equipment. Another method of reducing emissions directly would be to limit the amount of cumulative development allowed in the region. This measure would be under the jurisdiction of local agencies; the associated costs would be less well-defined, and could involve the cost of lost business opportunities and associated employment and general economic activity effects. All of the above costs eventually would be borne by consumers and taxpayers.

The approach ultimately used by ABAG, BAAQMD, and MTC in developing the Bay Area Air Quality Plan, which established pollution-reduction strategies in response to existing ozone and carbon monoxide problems, was not to reduce pollutant emissions generated by new development alone, but to reduce pollutant emissions from the combined existing and projected inventory of all types of pollutant sources, in the most cost-effective way possible, given the political constraints of the region. The agencies identified an extensive list of candidate control measures, and estimated the potential amount of pollutant reduction achieved and the cost (where identifiable) in dollars per pound of pollutant removed for each measure. The measures were ranked by their cost-effectiveness and selected on that basis until the required amount of pollutant reductions to achieve

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standards was achieved. The measures selected include a variety of stationary-source (e.g., industrial) emission limitations, transportation system improvements, and an inspection/maintenance program for motor vehicles. Land use controls were dropped from further consideration early in the process.

EMPLOYMENT DISPLACEMENT

COMMENT

"The next section or page I would direct your attention to is p. 41, Existing Use [at] Project Site, which is an exact illustration of that [expansion of the Financial District]. What is going to happen to these businesses? Is the Planning Commission going to require that these businesses not be forced out of business? It would be a first. I think it's a necessity. I think that is one of the mitigation measures. I don't think it should be a mitigation measure. I think that should be a requirement. I think it's time for the Planning Department to, in the Downtown EIR and in its plans apart from the Downtown EIR, bite the bullet, that your Commerce and Industry Element stresses that the best employment opportunities for San Francisco residents are in small business. Small businesses provide more economic opportunity for our unemployed, for our immigrants, for the people who need jobs the most."
(Sue Hestor)

RESPONSE

Tenant displacement effects of the project are discussed on p. 120 of the EIR and pp. 273-276 of this chapter. As stated on p. 276 of this chapter, the project sponsor has negotiated termination of occupancy with several project tenants, without any evictions, and would discuss with existing tenants their potential occupancy of the new building.

ALTERNATIVES

DOWNTOWN PLAN ALTERNATIVES

Design of Downtown Plan Alternative

COMMENTS

"I really was shocked at what the Downtown Plan will produce and what it will allow." (Commissioner Bierman)

"I would agree with Mr. Chin that this Downtown Plan [Alternative], if this is what the Downtown Plan is going to give us, it shows what a paper tiger the Downtown Plan is. I think your staff should be embarrassed. Is this as good as we are going to get out of the Downtown Plan? I guess this is as good an argument as any to be against the architectural quality of the Downtown Plan, because this building is not too great." (Sue Hestor)

RESPONSE

The design and discussion of Alternative 2: New Construction Complying with the Proposed Downtown Plan, and Alternative 2A: Downtown Plan Alternative - No Shade on Portsmouth Square at Critical Times, have been replaced or revised. Downtown Plan alternatives addressed in the EIR now include Alternative 2 and Alternative 2A, pp. 147-153 of the EIR, as revised on pp. 316-328 of this chapter, and new Alternative 2B: Downtown Plan Alternative - 10:1 FAR, No Transfer of Development Rights, pp. 329-332, of this chapter.

Table 3, Comparison of Proposed Project with the Downtown Plan, p. 51 of the EIR, has also been revised and included on pp. 317-318 of this chapter.

The following text replaces the discussion of Alternatives 2 and 2A on pp. 147-153 of the EIR. New or revised language is underlined:

"B. ALTERNATIVE 2: NEW CONSTRUCTION COMPLYING WITH THE PROPOSED DOWNTOWN PLAN

"Alternative 2 would be a project consistent with the controls proposed in the Downtown Plan, Proposal for Citizen Review, August 1983 (the plan), published by the Department of City Planning, containing proposed planning regulations for the Downtown. See Chapter IV.A., pp. 49-52, for a description of the major features of the Downtown Plan related to the project site. Table 3 (revised), p. 51 [of the EIR,] compares the proposed project with provisions of the Downtown Plan and with Downtown Plan Alternatives 2, 2A and 2B, which are discussed on pp. 147-152b [of the EIR].

"DESCRIPTION OF ALTERNATIVE"

This alternative would develop a new structure on most of the site (Lots 5, 6, 6A, 7, 8, 9, 10, 11 and 28; see Figure 38). The alternative would demolish 638-640 Sacramento St. (Lot 11, to be retained with the project), to allow maximum development of floor area for the site, permitted under the proposed Downtown Plan, within the height and bulk limits of the plan.

653-655 Commercial St., on Lot 27, would be retained. The alternative would use the total allowable 10:1 FAR, proposed in the Downtown Plan, or 261,700 gross sq. ft., plus 49,300 gross sq. ft. of additional floor area available with Transfer of Development Rights (TDR) from other sites in the C-3-0 district. (The plan would permit TDR from sites containing architecturally significant buildings or privately developed open space, if the additional floor area conforms to the plan's height, bulk and other controls for the receiver site.) The alternative would include about 23,000 sq. ft. of ground-floor retail,

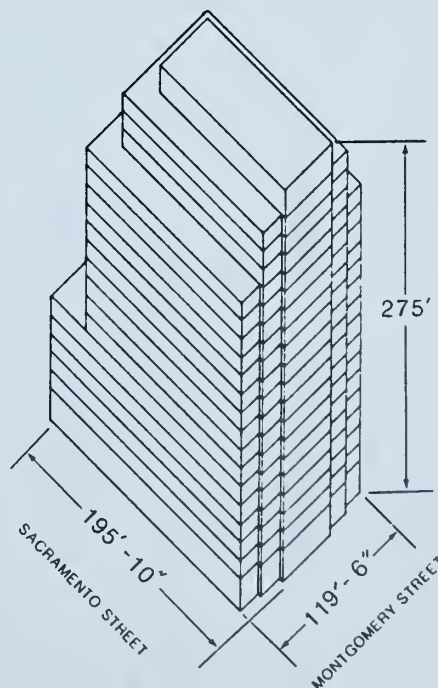


FIGURE 38
(Revised)
Alternative 2 -
Downtown
Plan Alternative

SOURCE
Skidmore, Owings & Merrill

TABLE 3 (Revised): COMPARISON OF PROPOSED PROJECT WITH THE DOWNTOWN PLAN

Major Development Controls Pertaining to Project Site	Current Controls	Proposed Project	Proposed Requirements in the Downtown Plan	Downtown Plan Alternatives /c/		
				Alternative 2: 12:1 FAR	Alternative 2A: No Shadow Port. Sq.	Alternative 2B: 10:1 FAR
Base FAR	14:1	14:1	10:1 /a/	12:1 /a/	11.5:1 /a/	10:1 /a/
Height Limit	400 ft.	350 ft.	250 ft. /b/	275 ft. /b/	250 ft.	275 ft. /b/
Average Floor Area	18,000 sq.ft. /d/	14,000 sq.ft.	Varies by bulk zone; see below.	See below.	See below.	See below.
Maximum Diagonal	200 ft.	170 ft.	Varies by bulk zone; see below.	See below.	See below.	See below.
Base Zone Height	NA	NA	80 ft.	85 ft.	85 ft.	85 ft.
Lower Tower Zone /e/ Max. Average Floor Area	NA	NA	20,000 sq.ft.	85 - 215 ft.	85 - 200 ft.	85 - 215 ft.
Max. Average Diagonal			200 ft.	18,600 sq.ft.	17,800 sq.ft.	14,500 sq.ft.
Max. Plan Width			160 ft.	200 ft.	200 ft.	175 ft.
				160 ft.	160 ft.	130 ft.
Upper Tower Zone /e/ Max. Average Floor Area	NA	NA	12,000 sq.ft.	215 - 275 ft.	200 - 250 ft.	215 - 275 ft.
Max. Average Diagonal			160 ft.	11,600 sq.ft.	10,300 sq.ft.	8,600 sq.ft.
Max. Plan Width			140 ft.	160 ft.	160 ft.	140 ft.
Max. Floor Area			17,000 sq.ft.	140 ft.	140 ft.	110 ft.
Volume Reduction			45/35/30% /f/	11,600 sq.ft. 50%	11,600 sq.ft. 70%	8,600 sq.ft. 50%
Tower Extension /f/	NA	NA	25 ft.	25 ft.	--	25 ft.
Incorporation of Art	Not required.	Art would be incorporated.	Art equal to 1% of total construction costs.	Art would be incorporated to meet criteria.	Art would be incorporated to meet criteria.	Art would be incorporated to meet criteria.
Ground-floor Retail	Retail permitted.	9,900 sq.ft. proposed.	Required; would be excluded from allowable FAR in C-3-0 district.	18,000 sq.ft. /a/	18,000 sq. ft. /a/	9,900 sq. ft. /a/

(Continued)

TABLE 3 (Revised) (Continued): COMPARISON OF PROPOSED PROJECT WITH THE DOWNTOWN PLAN

Major Development Controls Pertaining to Project Site	Current Controls	Proposed Project	Proposed Requirements in the Downtown Plan	Downtown Plan Alternatives /c/		
				Alternative 2: 12:1 FAR	Alternative 2A: No Shadow Port. Sq.	Alternative 2B: 10:1 FAR
Sunlight Access	--	Would shade about 30% of Portsmouth Square at 8:00 to 8:30 a.m. in March (about 9:00 to 9:30 a.m. in September. (See pp. 71-78.)	Criteria based on solar fan, height and bulk and time, duration and location of shadow. Critical times are 8 am to 4 pm PST, March 21 to Sept. 21.	Would shade about 12% of Portsmouth Sq. at 8-8:30 am (about 9-9:30 PDT). (See p. 152.)	Would not shade Portsmouth Sq. after 8:00 a.m. (about 9:00 PDT). and less than 5% at 8:30 a.m. (about 9:30 PDT).	Would shade less than 10% of Portsmouth Sq. at 8:00 a.m. (about 9:00 PDT), and less than 5% at 8:30 a.m. (about 9:30 PDT).
Wind	None.	Would increase wind speeds above 8 mph at some street-level locations.	Building should not increase sidewalk wind speeds above 11 mph, and sitting area speeds above 8 mph.	Similar to Project	Similar to Project	Similar to Project
Recreation / Open Space	Not required.	None.	1 sq.ft. for public use per 50 sq.ft. of gross floor area; 6,740 sq.ft. for project size.	6,680 sq.ft.; would be on-site or met by off-site development of public open space.	6,380 sq.ft.; would be on-site or met by off-site development of public open space.	5,140 sq.ft.; would be on-site or met by off-site development of public open space.
Off-street Loading	2 spaces required.	2 spaces.	0.1 space per 10,000 sq. ft. of office gross floor area for buildings containing more than 10,000 sq.ft.; 1 space for 10,000-50,000 sq.ft. of retail area. 3 spaces required for project.	4 spaces (3 for office; 1 for retail).	4 spaces (3 for office; 1 for retail).	2 spaces (for office; none for retail).
Long-term Parking	None required.	23 spaces.	Discourage new long-term parking in downtown.	No long-term parking.	No long-term parking.	No long-term parking.

/a/ Downtown Plan would exclude ground-floor retail, building service and internal circulation areas from FAR; additional floor area in excess of 10:1 in Alternatives 2 and 2A reflects Transfer of Development Rights, permitted in the Downtown Plan.

/b/ Additional height up to 10% above limit permitted with reduced bulk, or for mechanical space or usable penthouse space within 50-degree planes from edge of roof.

/c/ See Section VII., Alternatives, pp. 147-152.

/d/ Based on 400-I Height and Bulk limits.

/e/ Based on 250-S Height and Bulk limits.

/f/ The requirements for volume reduction in the upper tower zone, which vary for each of the Downtown Plan alternatives according to the lower tower bulk and optional height extension, are about 45% volume reduction for Alternative 2 with 10% tower extension; about 35% reduction for Alternative 2A without extension; about 30% reduction for Alternative 2B with extension.

SOURCE: City Planning Code; The Downtown Plan, Proposal for Citizen Review, August 1983; Skidmore, Owings and Merrill; Environmental Science Associates, Inc.

building service and internal circulation uses, which the plan would exempt from FAR calculations. Total floor area for the alternative would thus be 339,000 gross sq. ft. (including 653-655 Commercial St.), or a ratio of building area to site area of 12.9:1 (including ground floor space), compared with 366,390 gross sq. ft. and 14:1 for the project. The new building in this alternative would include a total of 334,000 gross sq. ft., compared with a proposed 337,150 gross sq. ft. of new construction for the project.

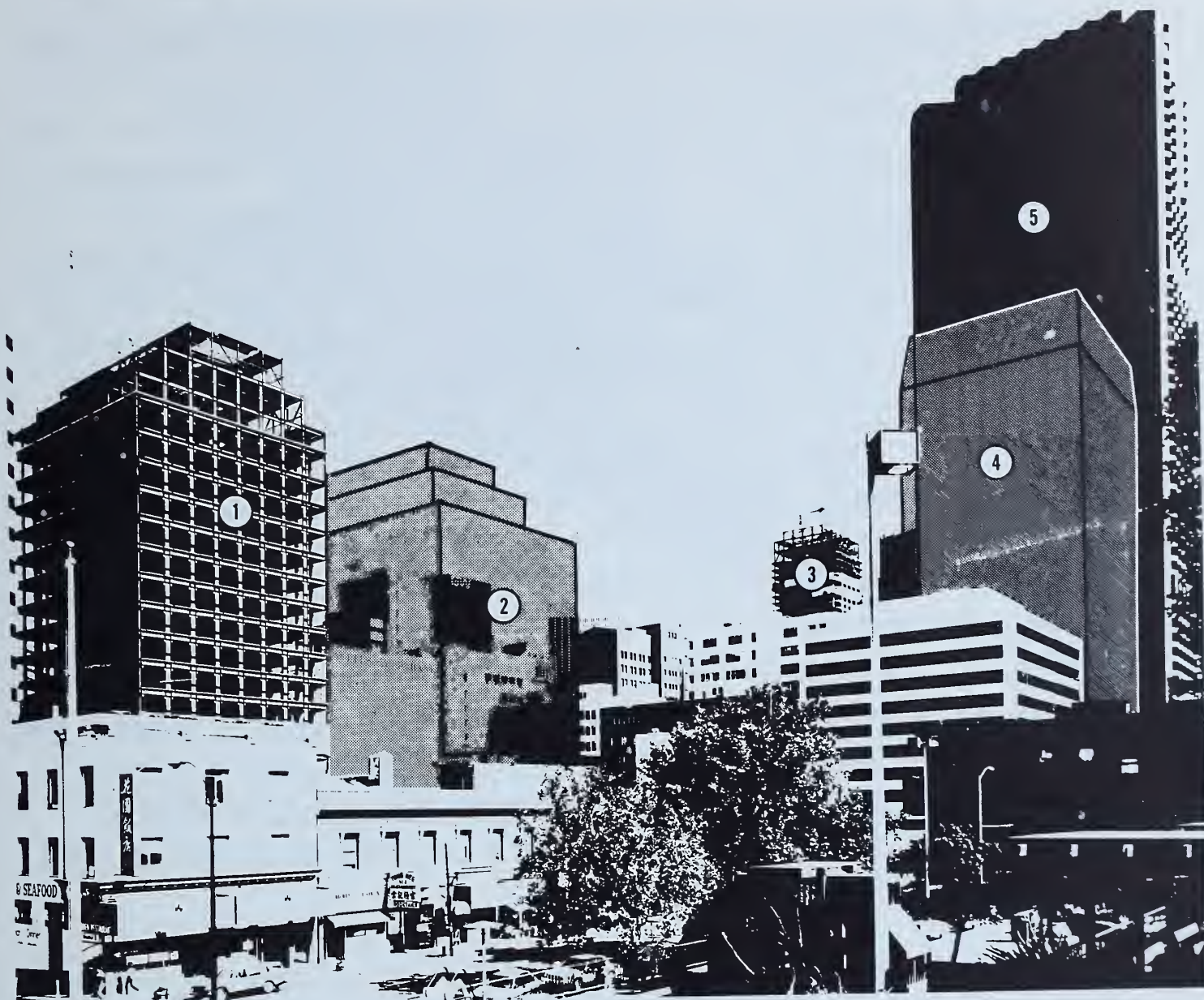
"The plan proposes a height limit for the site of 250 ft. and would permit optional increases in building height: either a 10% increase in the height limit (25 ft. for the site) for reduced building profile and bulk, or additional height for mechanical or penthouse space within the volume formed by planes sloping inward from the outer edge of the roof at a 50-degree angle with the horizontal. The alternative would use the first option, and would be 275 ft., and 19 stories high, compared with 350 ft. and 26 stories for the project. The plan would control bulk and floor size through Bulk Control Zone Charts A and B (pp. 92-93 of the plan), which relate dimensions to building height. The building would include setbacks on the west elevation at the 85 ft. level, and setback floors above 215 ft., to meet these requirements.

"Building use would be the same as for the proposed project (office with ground-floor retail uses). This alternative would retain and refurbish the exterior of 653-655 Commercial St. (Lot 27), on the westernmost part of the site.

"A comparison of features of this alternative with those of the proposed project is shown in Section IV.A., Table 3, p. 51 [pp. 317-318 of this chapter].

"DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

"The lower height of this alternative, compared to that of the project, would be less visible in mid- and long-range views, primarily from the west (see Figure 39, p. 149 [p. 320 of this chapter]). This alternative would cast shorter shadows than the project. The Downtown Plan defines critical times



- ① Bank of Canton (under construction)
- ② Alternative 2: Downtown Plan Alternative
- ③ Citicorp Building (under construction)
- ④ 580 California (under construction)
- ⑤ Bank of America

FIGURE 39 (Revised)

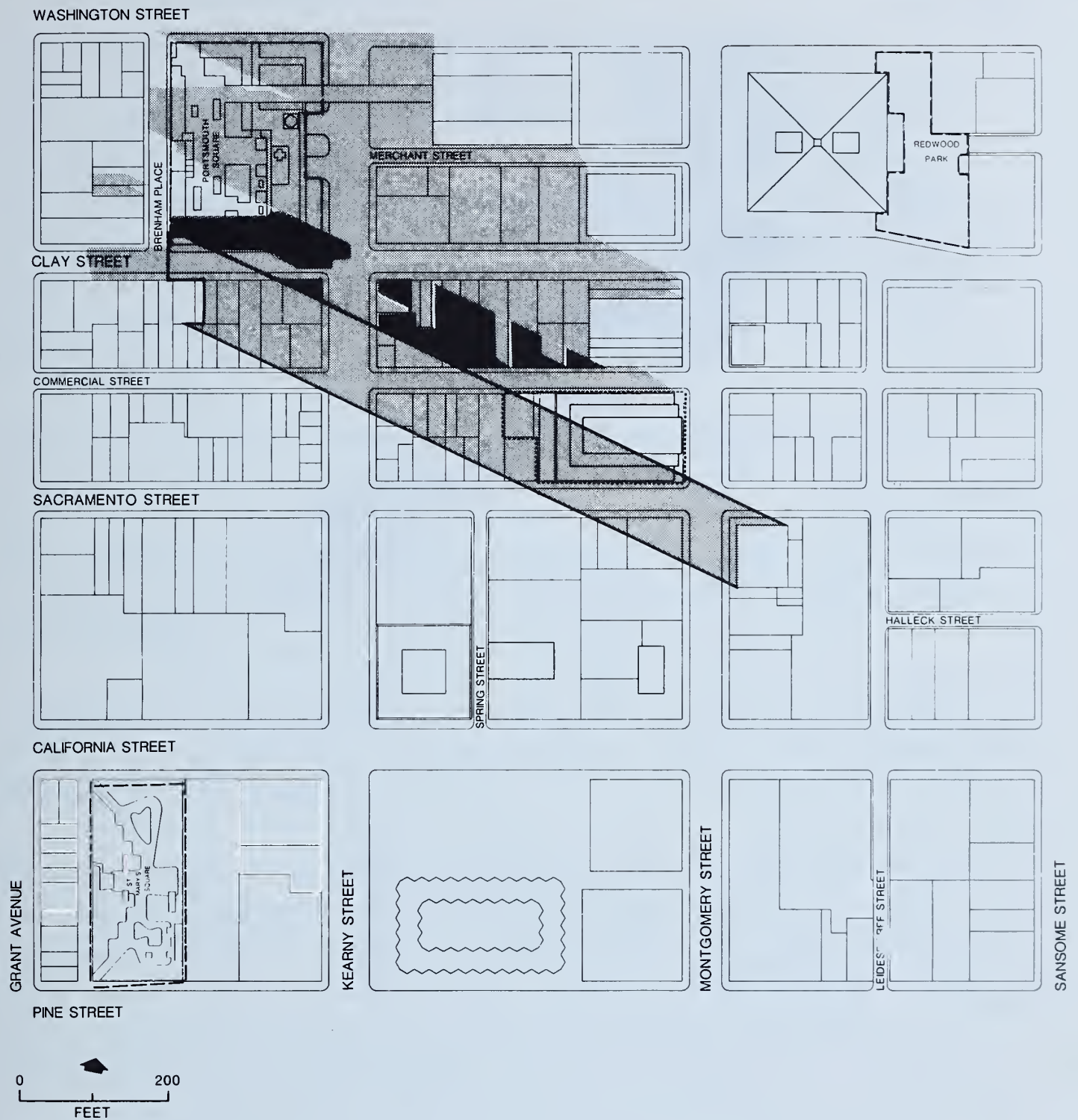
View of Alternative 2 -
Downtown Plan Alternative,
From Portsmouth Square

SOURCE:
Environmental Science Associates, Inc.

for sunlight access to Portsmouth Square as 8 a.m. to 4 p.m., Standard Time, from March 21 to September 21 (9 a.m. to 5 p.m., Daylight Time). During worst-case conditions in mid-March (and mid-September), the alternative would newly shade the southerly portion (about 12%) of Portsmouth Square at about 8 a.m. (8:48 a.m., Daylight Time in mid-September). At 8:30 a.m. in March (9:18 a.m. in September), the alternative would newly shade the southeasterly corner (less than 5%) of the square. (See Figures 40 and 41, pp. 149a-149b, [pp. 322-323 of this chapter.]) In comparison, the proposed project would shade 20% to 40% of the park at these times (see Figures 23-24, pp. 73-74). The alternative would not shade Portsmouth Square from early April through early September. Other shadow effects of the alternative would be similar to those of the project. At the base of the Transamerica Pyramid, with the proposed project, northwesterly wind speeds would be 11.7 mph; existing wind speeds are 12.2 mph./1/ With the alternative, northwesterly wind speeds would also be expected to exceed 11 mph at this location, but would not exceed 14 mph. All other projected wind speeds for this alternative would be expected not to exceed the 11 mph comfort criterion./2/ Some wind speeds may exceed the 8 mph criterion recommended as the maximum wind speed in the Downtown Plan. The proposed ordinance language which would implement the Downtown Plan distinguishes between a maximum of 11 mph for pedestrian areas and 8 mph for areas used for sitting.

"The setback at the west frontage of the tower in this alternative would relate to building heights of older buildings on Commercial St., including development to the west. The proposed project would not have this setback. The alternative would have additional setbacks at the north, west, and south frontages above the 215-ft. level, compared to the project's tapered profile above the 255-ft. level.

"Because this alternative would replace all the low-rise buildings on the project site, except that on Lot 27, with a new 19 story-building, the alternative would alter the small-scale character of Commercial St., at the street facade, to a somewhat greater extent than the project. The alternative would be lower, overall, than the project.

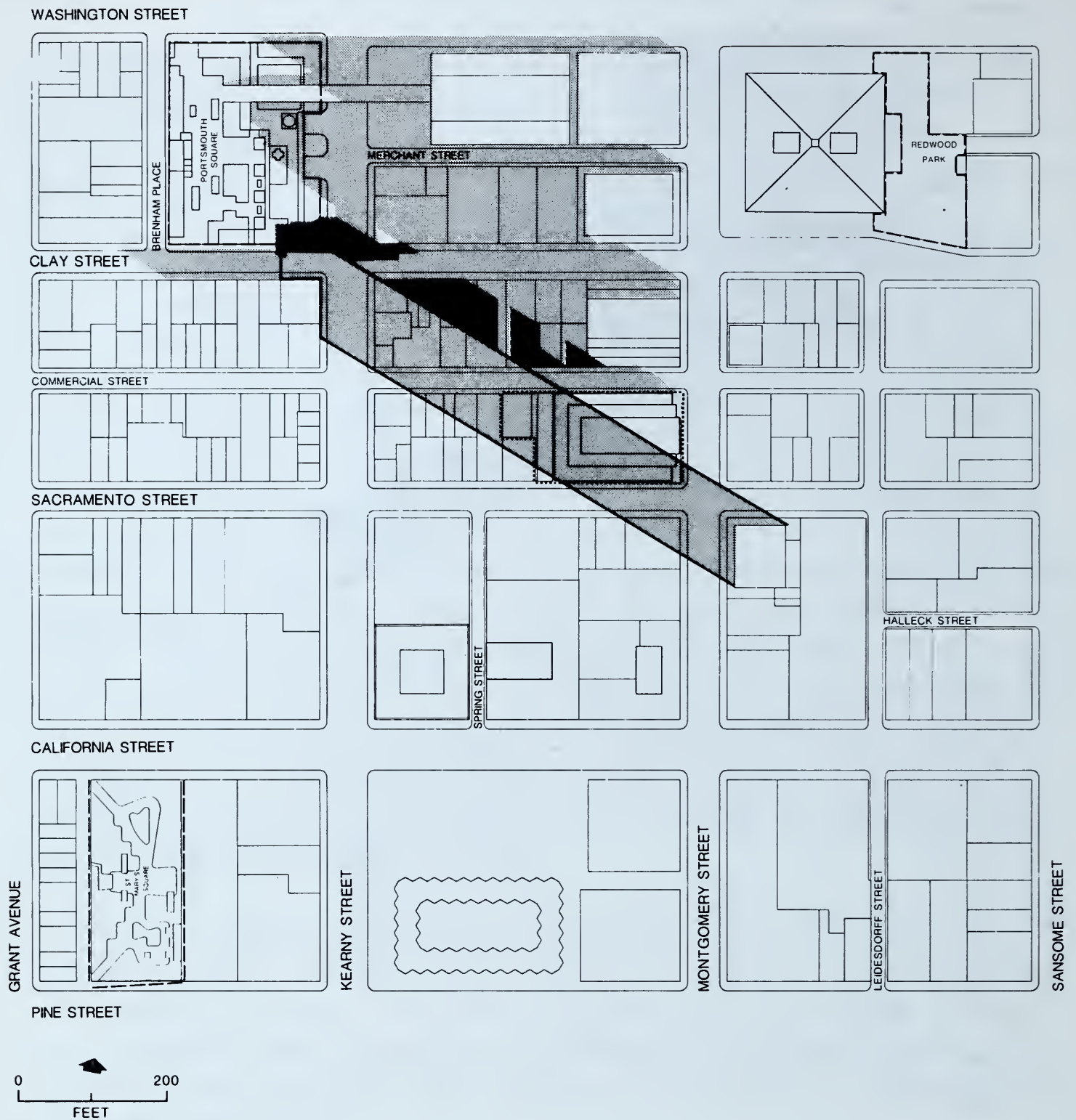


-  Existing Shadow
-  Under Construction Building Shadow
-  Project Shadow (New Shadow Only)
-  Project Site
-  Open Space

FIGURE 40

Alternative 2 Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.



-  Existing Shadow
-  Under Construction Building Shadow
-  Project Shadow (New Shadow Only)
-  Project Site
-  Open Space

FIGURE 41

Alternative 2 Shadow Pattern -
March/September 21, 8:30 A.M. PST/9:18 A.M. PDT

SOURCE:
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

"The plan proposes that Commercial St., between Montgomery and Kearny Sts., be a pedestrian/service street, with improvements (widened sidewalks, sitting areas) in pedestrian areas, or in those portions of the vehicle right-of-way not needed for service, in accordance with the earlier Center City Circulation Study recommendations. The alternative would thus include widened sidewalks and retail uses along the Commercial St. frontage of both the new building and 653-655 Commercial St., proposed to be retained and refurbished. The project similarly proposes widened sidewalks, landscaping and retail uses along its Commercial St. frontage.

"The plan would require a 1:50 ratio of open space to new building space as part of development in the C-3-0 district, or 6,680 sq. ft. for this alternative. The alternative would meet this requirement through project sponsor funding of development of off-site, public open space land, as allowed by the plan, or by development of public open space on the project's rooftop areas.

"The Downtown Plan would require 1% of construction costs to be invested in publicly visible works of art, such as sculpture or murals. The alternative would meet this requirement.

"Off-street loading space standards proposed in the plan would require four spaces for this alternative, which would be provided with access from the Sacramento St. frontage, as with the proposed project. In comparison, the project would include two loading spaces. Truck movements into the alternative's loading spaces could delay trolley buses on Sacramento St., as could occur with the proposed project. The plan discourages new long-term parking in the downtown core, limiting new long-term parking facilities to those needed to replace parking eliminated in the core. This alternative would have no parking, compared to 23 spaces for the project.

"Demolition of one more existing building for this alternative would displace about 95 more employees than would the proposed project. On the assumption that the floor area per employee would be comparable in the existing and new space, the alternative would result in less net new employment on the site, and less housing demand, than the proposed project, in proportion to the

reduced floor area. The alternative floor area would be about 92% of the proposed project floor area (over the whole site), resulting in about 1,100 net new employees and generation of about 245 new households in San Francisco, compared to 270 for the project. The alternative would probably have fiscal effects comparable to those of the proposed project, because the smaller floor area of this alternative would generate lower revenues, and demand proportionately fewer services.

"Transportation, circulation, parking, air quality and energy impacts associated with the on-site uses would be proportionately less than those of the proposed project, because the floor area of the alternative would be about 92% of the proposed project floor area.

"Construction noise impacts would probably be comparable to those of the proposed project. Energy consumption for operation of the building would be lower with the alternative, because of the greater energy efficiency of new construction compared to that of the existing on-site buildings, and the smaller floor area of the alternative.

"SPONSOR'S REASONS FOR REJECTION

"The project sponsor has rejected this alternative, because to obtain maximum development of the site, it would necessitate demolition of an additional low-rise building fronting on Commercial and Sacramento Sts. and would result in greater displacement of existing businesses in site buildings than would the project. The sponsor feels that the proposed project would be a superior design that would be compatible with existing development on Montgomery St. in the Financial District, and would maintain the scale of a portion of Commercial St."

"C. ALTERNATIVE 2A: DOWNTOWN PLAN ALTERNATIVE: NO SHADOW ON PORTSMOUTH SQUARE AT CRITICAL TIMES

"Alternative 2A would be similar to Alternative 2, above, except that the new building would be 250 ft. and 17 stories tall, compared to 350 ft. and

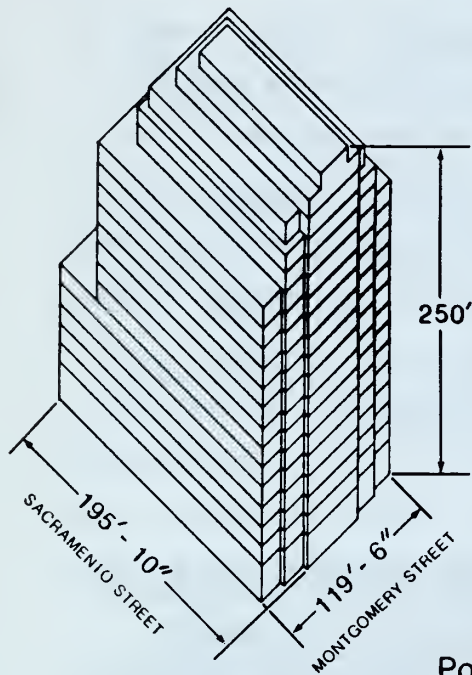
VIII. Summary of Comments and Responses

26 stories for the proposed project, and 275 ft. and 19 stories for Alternative 2 (see Figure 42, p. 152a [p. 327 of this chapter]). Total floor area for the alternative would be 324,000 sq. ft. (including TDR from other sites and the retained 653-655 Commercial St. building). The ratio of building area to site area for this alternative would be 12.4:1, compared to 366,390 sq. ft. and 14:1 for the project and 339,000 sq. ft. and 12.9:1 for Alternative 2. The new building would include 296,000 sq. ft. of office space, and about 23,000 sq. ft. of ground floor retail, building service, and internal circulation uses, for a total new building floor area of 319,000 sq. ft.

"At 8 a.m. on March 21 (8:48 a.m. September 21) the alternative would shade an area about five feet deep along part of the southern boundary of Portsmouth Square (see Figure 43, p. 152b [p. 328 of this chapter]). The alternative would not shade any part of the square at 8:30 a.m. or later, Standard Time in March (9:18 a.m., Daylight Time in September). After late March and until mid-September, the alternative would result in no new shading of Portsmouth Square after 8 a.m. Standard Time (9 a.m. Daylight Time) between March 21 and September 21. These are critical times for solar access to the Square, as proposed in the Downtown Plan. Other shadow effects of the alternative would be similar to those of the project. That is, at other times of the day and year, and at other locations, the new shadow is less sensitive to the height of a structure at 505 Montgomery Street than is Portsmouth Square at the above specific times. (See Figures 26-27, pp. 76-77, and Figures 28-32, pp. 79-83.)"

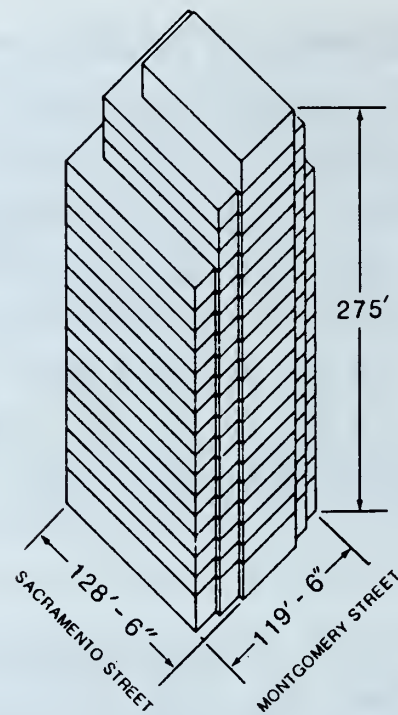
Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 88% of the proposed project floor area. All other effects would be similar to those of the project.

"The project sponsor has rejected this alternative for the reasons described in Alternative 2, above, and because this Alternative would allow less development of floor area than with Alternative 2 or the proposed project."



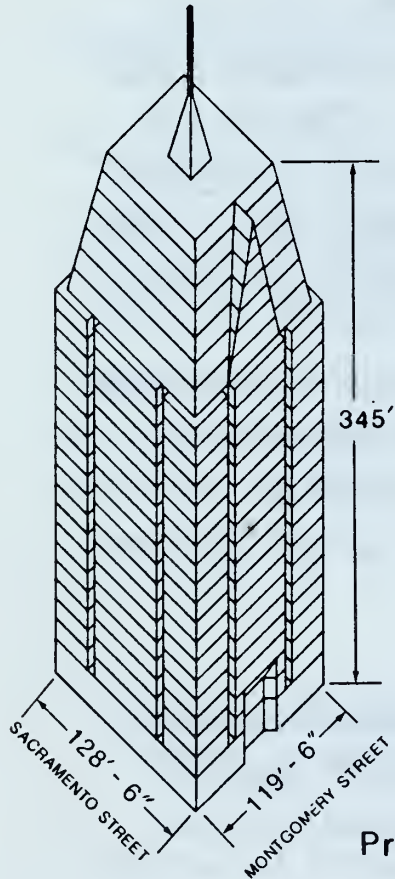
Downtown Plan
Alternative:
No Shadow on
Portsmouth Square
at Critical Times

SOURCE:
Skidmore, Owings & Merrill



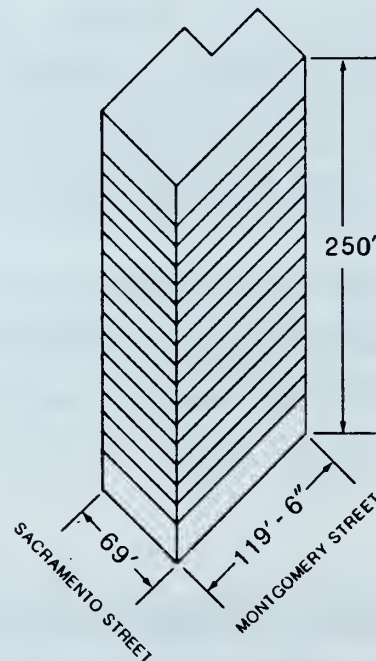
Alternative 2B -
Downtown Plan
Alternative, 10:1 FAR, No TDR

SOURCE:
Skidmore, Owings & Merrill



Alternative 4-
Preferred Alternative

SOURCE:
Skidmore, Owings & Merrill



Alternative 5-
New Construction on Lots
5, 6A and 7 Only

SOURCE:
Skidmore, Owings & Merrill

FIGURE 42
Alternatives 2A, 2B, 4 and 5

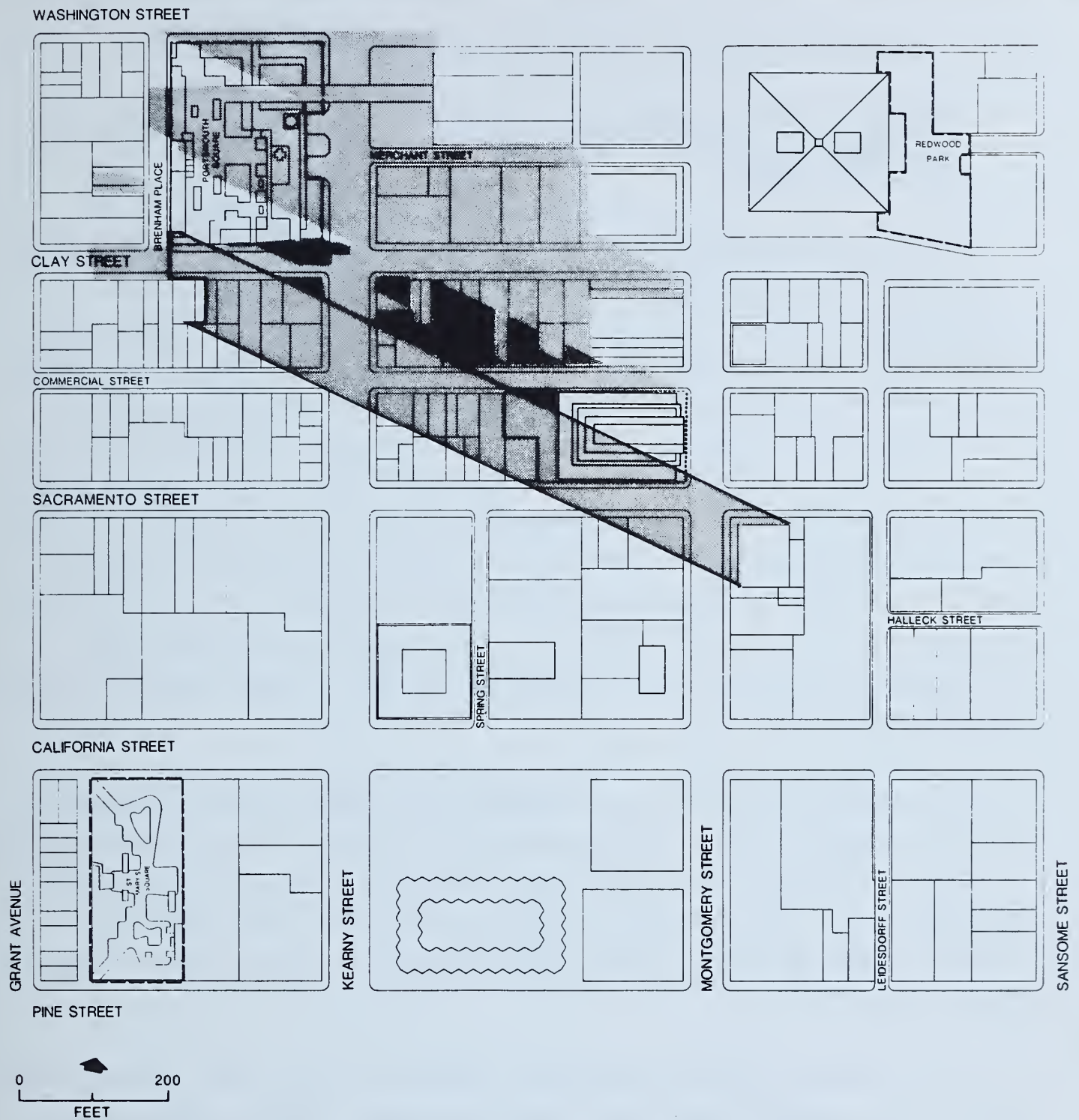


FIGURE 43

Alternative 2A Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

The following alternative is added on new pp. 153-153c of the EIR:

"D. ALTERNATIVE 2B: DOWNTOWN PLAN ALTERNATIVE - 10:1 FAR, NO TRANSFER OF DEVELOPMENT RIGHTS

"Alternative 2B would be a Downtown-Plan-conforming alternative with a total FAR of 10:1, the base office FAR proposed in the Downtown Plan. The alternative would be 275 ft. and 19 stories tall, compared to 350 ft. and 26 stories for the proposed project. (See Figure 42, p. 152a) Total gross floor area on the site would include 280,700 sq. ft.: 261,700 sq. ft. of office space, and 19,000 sq. ft. of ground-floor retail space which would be excluded from FAR calculations in the Downtown Plan. The alternative would retain the buildings at 638-640 Sacramento St. and 653-655 Commercial St., as would the proposed project. The ratio of total building area (including ground-floor area) to total site area of this alternative, would be 10.7:1, compared to 14:1 for the project. The new building would include about 242,800 sq. ft. of office space, and 9,900 sq. ft. of retail space, or about 252,700 sq. ft. total.

"The alternative would conform to Downtown Plan height and bulk limitations. The Plan proposes a 250 ft. height limit for the site, and would permit a 10%, or 25 ft., increase in this limit, with reduced building profile and bulk in the upper tower. For a 275 ft. building on this site, the alternative's setbacks above the 215 ft. level would meet the Plan's bulk criteria (see Table 3, p. 51).

"The lower height of this alternative, compared to that of the project, would make it less visible in mid- and long-range views, primarily from the west. This alternative would cast shorter shadows than the project. During worst-case conditions in mid-March (and mid-September), the alternative would newly shade the southerly portion of Portsmouth Square (less than 10% of the Square) at 8:00 a.m. in March (8:48 a.m., Daylight Time in mid-September). At 8:30 a.m. in March (9:18 a.m., Daylight Time), the alternative would newly shade the southeastern corner (less than 5%) of the Square (see Figures 44-45, pp. 153a-153b [pp. 330-331 of this chapter]). These effects would be similar to those of Alternative 2, above. These effects would be similar to

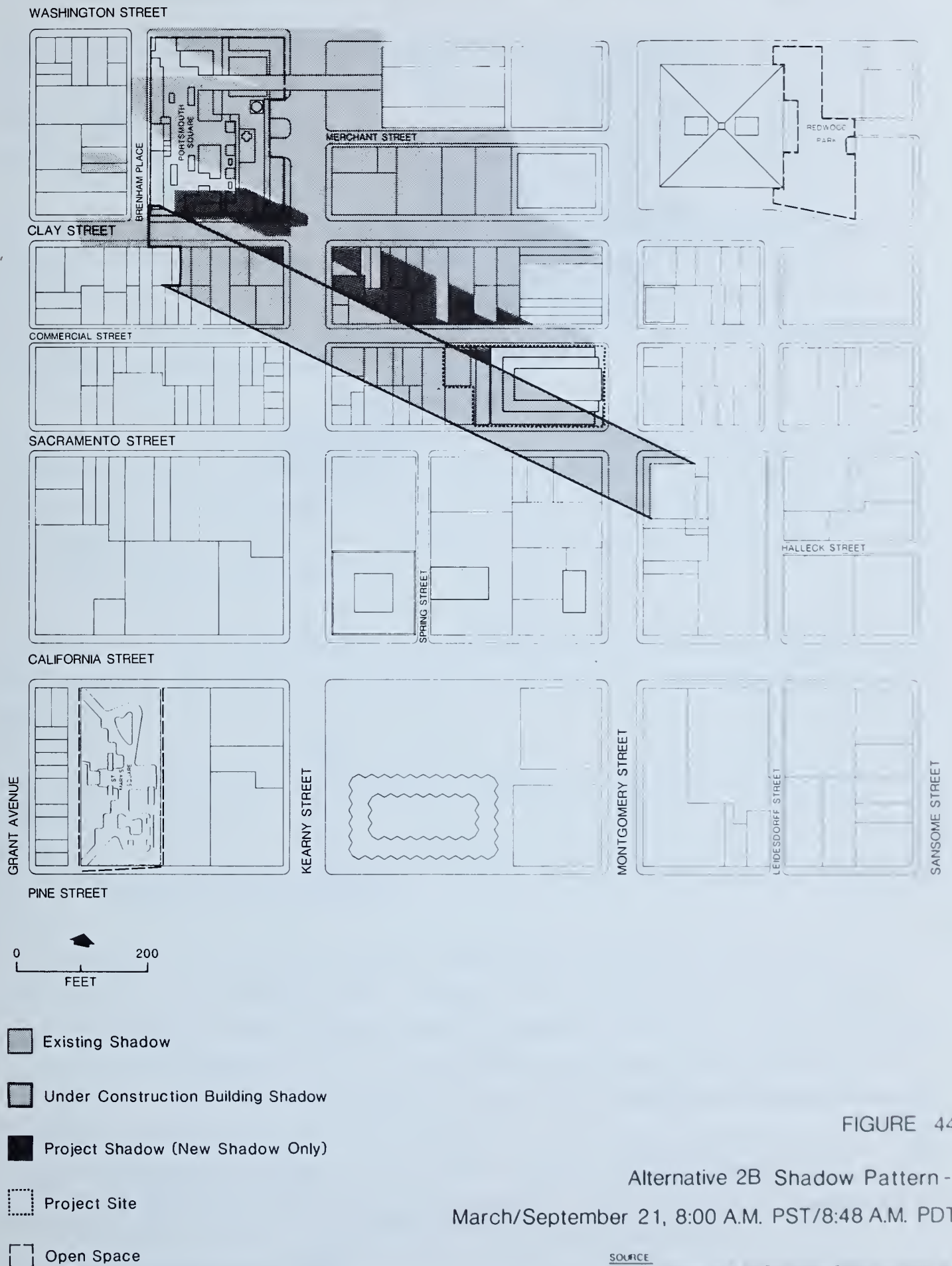


FIGURE 44

Alternative 2B Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

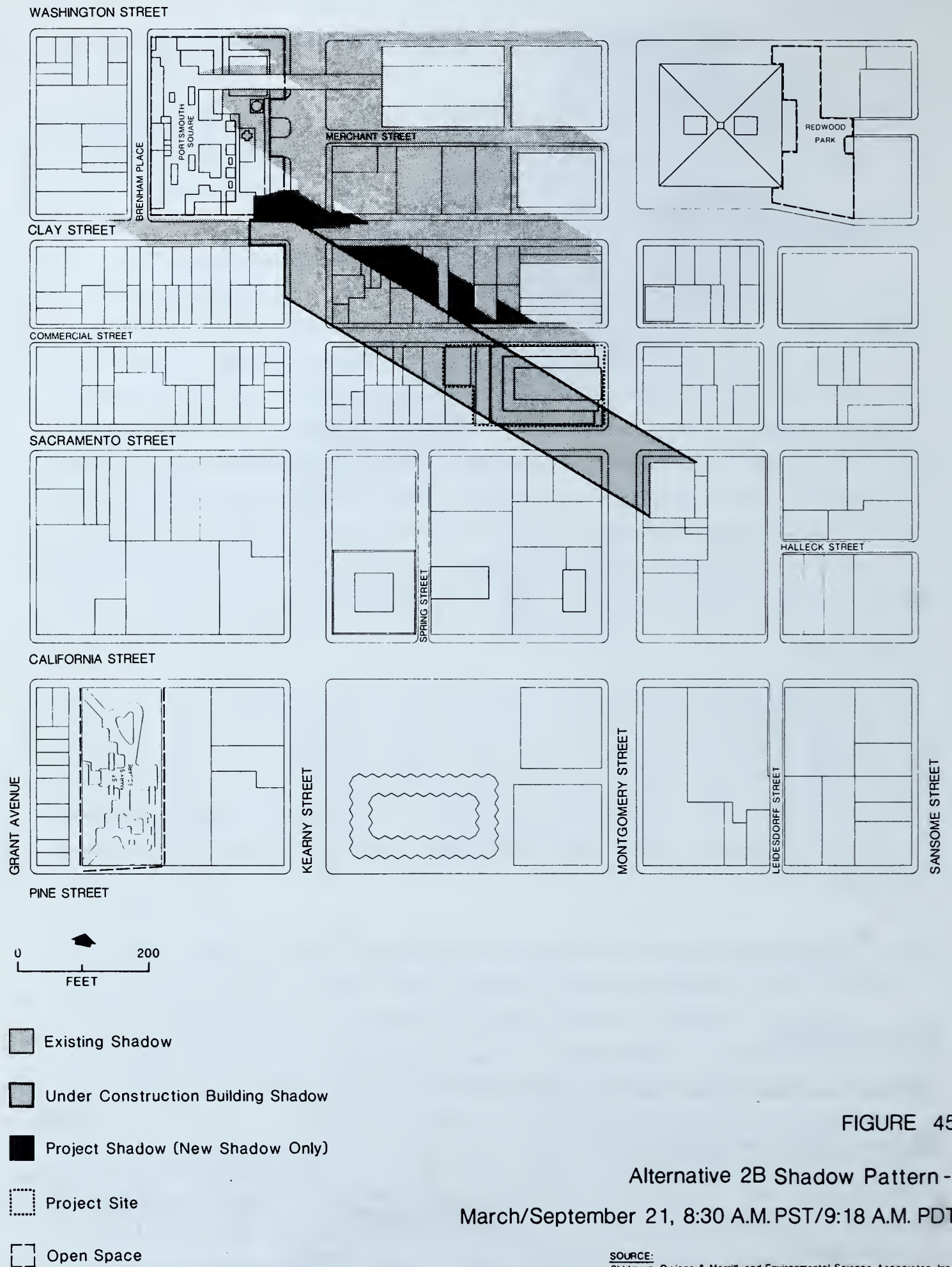


FIGURE 45

Alternative 2B Shadow Pattern -
March/September 21, 8:30 A.M. PST/9:18 A.M. PDT

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those of Alternative 2, above and would be greater than those of Alternative 2A. That alternative would have a larger floor area but lower overall height. Other shadow effects of the alternative would be similar to those of the project.

"Off-street loading space standards proposed in the plan would require two spaces for this alternative, which would be provided with access from the Sacramento St. frontage, as with the proposed project. Truck movements into the alternative's loading spaces could delay trolley buses on Sacramento St., as could occur with the proposed project.

"Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 77% of the proposed project floor area. All other effects would be similar to or less than those of the project.

"The project sponsor has rejected this alternative because it would allow development of less floor area than with Alternative 2 or the proposed project."

The first paragraph on p. 11, Chapter I., Summary, of the EIR is revised as follows:

"2. DOWNTOWN PLAN ALTERNATIVE

"Alternative 2 would be a project consistent with planning controls proposed in The Downtown Plan - Proposal for Citizen Review, August 1983. The alternative would develop a new structure on most of the site, except for 653-655 Commercial St., at the western end of the site, which would be retained. The alternative would use the total allowable 10:1 FAR proposed in the Downtown Plan, or 261,700 gross sq. ft., plus 49,300 gross sq. ft. of additional floor area available with Transfer of Development Rights (TDR) from other sites in the C-3-0 District. Total floor area for the alternative, including ground-floor space and 653-655 Commercial St., would be 339,000 gross sq. ft., or a ratio of building area to site area

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of 12.9:1, compared to 366,390 gross sq. ft. with a 14:1 FAR for the project. The plan proposes a 250-ft. height limit for the site and would permit 25 ft. in additional height in exchange for a reduction in the volume of the upper tower. The alternative would thus be 275 ft. tall, with 19 stories, compared with 350 ft. and 26 stories for the project. The alternative would meet Downtown Plan bulk limits, with setbacks at the 85-ft. level and above 215 ft."

The third paragraph on p. 11 of the EIR is revised as follows:

"Transportation, circulation, parking, air quality, and energy impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 92% of that of the proposed project."

The first paragraph on p. 11a of the EIR is revised as follows:

"2A. DOWNTOWN PLAN ALTERNATIVE: NO SHADOW ON PORTSMOUTH SQUARE AT CRITICAL TIMES

"Alternative 2A would be similar to Alternative 2, above, except that the new building would be 250 ft. and 17 stories tall, compared to 350 ft. and 26 stories for the proposed project, and 275 ft. and 19 stories for Alternative 2. Total floor area on the site would be about 324,000 gross sq. ft. (a ratio of building area to site area of 12.4:1), compared to a total of 366,390 sq. ft. for the project and 339,000 sq. ft. for Alternative 2."

The following paragraphs are added preceding Alternative 3 on p. 12, Chapter I, Summary, of the EIR:

2B. DOWNTOWN PLAN ALTERNATIVE - 10:1 FAR, NO TRANSFER OF DEVELOPMENT RIGHTS

"Alternative 2B would be a Downtown-Plan-conforming alternative with a total office FAR of 10:1, the base office FAR proposed in the Downtown

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Plan. The new building would be 275 ft. and 19 stories tall, compared to 350 ft. and 26 stories for the proposed project. Total floor area on the site would be about 280,700 gross sq. ft. (a ratio of building area to site area of 10.7:1), compared to a total of 366,390 sq. ft. for the project. The alternative would retain buildings at 638-640 Sacramento St. and 653-655 Commercial St., as would the proposed project.

"The alternative would be less visible from mid- and long-range viewpoints, because of the lower overall height compared to the project. For the worst-case, the alternative would cast shorter shadows on Portsmouth Square in mid-winter/early-spring and mid-summer/early-fall mornings than would the project. These effects would be similar to those of Alternative 2.

"Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 77% of that of the proposed project. All other effects would be similar to those of the project."

Downtown Plan Alternative Shadow Effects

COMMENT

"Going on to really what the EIR calls the Downtown Plan alternatives, these Downtown Plan alternatives turn up with a number of problems, one of them being: Should we actually call these 'Downtown Plan Alternatives'? I believe that the Code -- well, the actual wordage of the Downtown Plan and the way it's laid out might say, 'Okay, in words, these alternatives might actually meet the requirements of the Downtown Plan.' In spirit, they do not, particularly Alternative 2. Because it still casts a shadow on Portsmouth Square.

"Another problem may be a problem of the Downtown Plan itself. Because according to the shadow studies that Peter Bosselmann's lab ["Sun and Light for Downtown San Francisco," Environmental Simulation Laboratory, U.C.

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Berkeley] did, the recommended height for that site in relation to Portsmouth Square is 200 ft. But under the Downtown Plan, the height limit there is 250 ft. And you get more goodies by somehow tapering the building. So you can go as high as the document says, 294 ft. As alternatives, that is unacceptable." (Alton Chin)

"In reference to alternative 2 (294 ft., 19 stories), we would have to see a detailed shadow diagram defining 'shorter shadows' (paragraph 2, page 11 of the EIR report) before we could make a judgement as to whether the project would adversely affect Portsmouth Square.

"Until we receive detailed shadow diagrams of proposed alternative 2, the Committee [for Better Parks and Recreation in Chinatown] feels that we would only be able to accept alternative 2A at 260 ft., 17 stories because it would maintain the sun exposure quality on Portsmouth Square by not casting any shadows. The original proposal at 26 stories would deprive the park of too much valuable sun. However, the Committee does feel that we could consider a proposal that would cast 'shorter shadows' which does not impact upon an active area." (Beverly Karnatz)

RESPONSE

As noted by the commenters, Alternative 2: Downtown Plan Alternative (pp. 147-152 of the EIR, as revised on pp. 316-325 of this chapter), would add shade to Portsmouth Square. Pages 148 and 150 of the EIR (p. 321 of this chapter) describe Alternative 2 shadow effects, stating that "during worst-case conditions in mid-March (and mid-September), the alternative would newly shade the southerly portion (about 12%) of Portsmouth Square, at 8 a.m. (8:48 a.m., Daylight Time in mid-September)." Shadow diagrams have been prepared for Alternative 2 and are shown on Figures 40-41, pp. 322-323 of this chapter.

As noted on p. 85 of the EIR, the Downtown Plan, p. 103, recommends that projects which would potentially shade open space areas during critical sunlight access times "be studied and a configuration selected which eliminates shadow altogether or which minimizes the amount of shadow,

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taking into account the amount of area shadowed, the duration of the shadow and the nature and the extent of the use of the space during that time." Because of the proposed Downtown Plan height limit for this site and Downtown Plan proposals to limit new shading of Portsmouth Square, the plan would require decision-makers to strike a balance between these two constraints (height and shadows).

Alternative 2A, Downtown Plan Alternative: No Shadow on Portsmouth Square at Critical Times, p. 152 of the EIR, and pp. 325-328 of this chapter, is a Downtown-Plan-conforming alternative which would not shade Portsmouth Square after 8:00 a.m. in March (8:48 a.m. Daylight Time in September), between March 21 and September 21, the critical times for solar access to Portsmouth Square, as proposed in the Downtown Plan. Both Alternatives 2 and 2A would conform to the proposed Downtown Plan. The Downtown Plan height limit for the site would be 250 ft.

The U.C. Berkeley report, "Sun and Light for Downtown San Francisco" is discussed on pp. 78 and 85 of the EIR, and the Portsmouth Square Solar Fan from that report is included in Figure 33, p. 84 of the EIR. That figure indicates that most of the project site would require a height limit of 200 ft., and a smaller portion, a limit of 300 ft., in order not to cast new shadows on Portsmouth Square at critical times defined in the Downtown Plan and the U.C. Berkeley report. These height limits actually represent a sloping plane, rising from 200 ft. to 300 ft. across the site. A building envelope below this plane would not cast new shadows on the square at critical times. (The proposed Downtown Plan height limit of 250 ft. is between these two heights.) The setback shape of the 250-ft.-tall Alternative 2A would be within this envelope and would therefore be consistent with the Portsmouth Square Solar Fan.

Retention of 638-640 Sacramento St.

COMMENTS

"On p. 11, the first time that Alternative 2 is talked about, it says that the building on Sacramento St. can't be retained. It says that again in the more elaborated discussion of the alternatives. But it never becomes clear why it

can't be retained. I am sure it has to do with needing the space because they aren't going as high. But that ought to be spelled out. It's sort of as though whoever is trying to work with the Downtown Plan is trying to make it as bad as they can. At least that was my impression of the Alternative 2, even Alternative 2A or whatever it is, the more modified height alternative." (Commissioner Bierman)

"What makes both Alternative 2 and 2A difficult to accept is what it does to Commercial St., because one of the trade offs that may be implicitly stated in this EIR is that if we can go to 350 ft., we won't tear down another building farther up Commercial St. and build that up. But if we can't build up to 350 ft., if we have to stay under 294 ft. then the alternative is that we will have to take out Lot [11], an office building [638-640 Sacramento St.], a three-story office building, and build that up to that height.

"What this does is, it makes Commercial St. even worse than it's going to be. And I say "worse than it's going to be" because even under the [350]-foot project, you are going to take up a third of Commercial St. with these twin towers, the Bank of Canton and 505 Montgomery." (Alton Chin)

RESPONSE

The following sentence is added to p. 11 of the EIR, after the first sentence of the second paragraph:

"The alternative would demolish 638-640 Sacramento St. (Lot 11, to be retained with the project), to allow maximum development of floor area for the site permitted under the proposed Downtown Plan, within the height and bulk limits of the plan."

The same sentence is added on p. 147 of the EIR, after the second sentence of the third paragraph.

New Alternative 2B, Downtown Plan Alternative - 10:1 FAR, discussed on pp. 329-332 of this chapter, would be a Downtown-Plan-conforming alternative that would not demolish 638-640 Sacramento St.

Proposed project effects on Commercial St. are discussed on pp. 186-189 of this chapter and throughout the DEIR.

NEW ALTERNATIVES

COMMENTS

"In sum, I would like the developer and the people who prepared this EIR to explore other alternatives besides Alternative 2A and Alternative 3. I would like to see what the possibilities are if we have the whole loaf, not just saving Commercial St., what's left of Commercial St., not just lowering the heights. I want to see the possibilities of having both. Because I think the environmental impacts of having a low-scale building that wouldn't dominate Commercial St. because of the size of the site is something that will be good for everyone. And I think it should be explored in the EIR." (Alton Chin)

"Because one of the things I think you need is an alternative that preserves all of the Commercial St. frontage. And this alternative I was going to ask for in 'Alternatives,' but I will ask for it here. You need an alternative that doesn't exceed the average size of the office buildings that have been constructed since 1965.

"Those of you who do the computations in the Downtown EIR will find that the average high-rise built since 1965 in this City is a quarter of a million square feet. That means a quarter of a million square feet is an economical building and a profit-making building in the City overall. This landlord wants to go considerably in excess of that. You need an alternative that doesn't exceed a quarter of a million square feet and doesn't take any of the frontage on Commercial St., that merely takes the two buildings -- I believe there are only two buildings. I guess it's three buildings fronting Montgomery Street. They look like two, but it's really three. And leave at least some of Commercial St. Why do they have to be that greedy? Why do they have to be that dominant?" (Sue Hestor)

RESPONSE

Alternative 5, described on pp. 341-344 of this chapter, would be a building developed only on Lots 5, 6A, and 7, the three lots fronting Montgomery St.

In addition, the following alternatives are added to the EIR:

Alternative 2B, described on pp. 329-332 of this chapter, would be a Downtown-Plan-conforming alternative at a 10:1 FAR that would retain the buildings at 638-640 Sacramento St. and 653-655 Commercial St., as would the proposed project; the new building with this alternative would have about 253,000 sq. ft. of floor area.

Alternative 4, the sponsor's Preferred Alternative, would be a design similar to the proposed project but with a 21-ft.-lower height, and is also added to the EIR, following p. 154.

The following Alternatives (4 and 5) are added on new pp. 154a-154f of the EIR (Alternative 3 in the EIR changes from Section D. to Section E.):

"F. ALTERNATIVE 4: PREFERRED ALTERNATIVE

"This alternative would be similar to the proposed project, except that it would be 345 ft. (including a mechanical level) and 25 stories tall, compared to 366 ft. (a 350-ft. building plus a 16-ft. cooling tower level) and 26 stories for the project. The new building would have a total floor area of 310,400 sq. ft. (295,100 sq. ft. of office space and 15,300 sq. ft. of ground-floor retail and service area), compared to 337,150 sq. ft. for the project. Total floor area on the site would be about 339,600 sq. ft., for a ratio of total building area to total site area of 13:1, compared to 366,390 sq. ft. and 14:1 for the project.

"The building design would be similar to that of the project, with a tapered building form above the 19th floor. (See Figure 42, p. 152a and Figure 46, p. 154b [p. 327 and p. 340 of this chapter].) The overall height of this alternative would be about 20 ft. shorter than that of the proposed project;

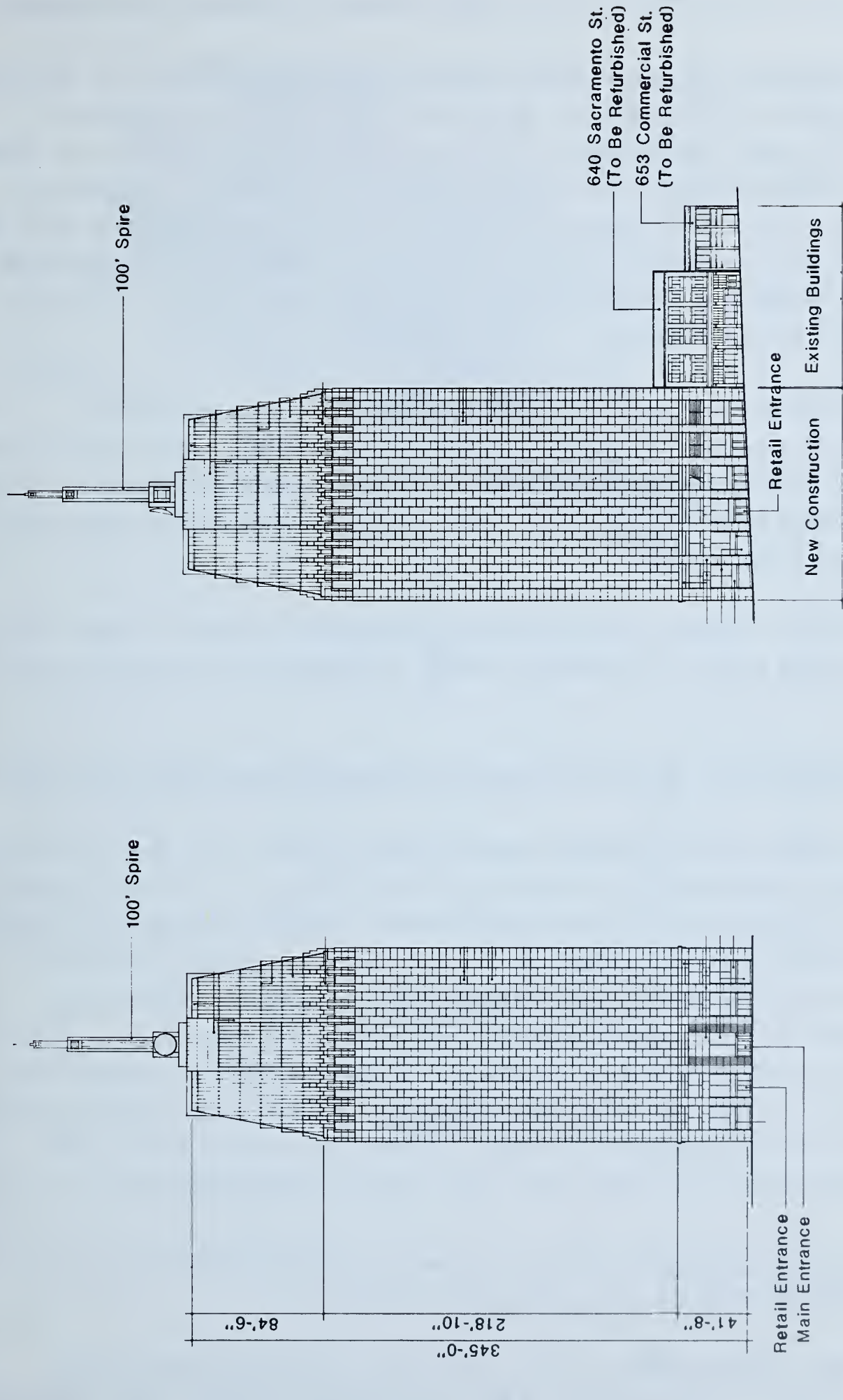


FIGURE 46

Preferred Alternative - Montgomery and Commercial Street Elevations

SOURCE: Skidmore, Owings & Merrill

the alternative would cast shorter shadows. (See Figures 47-48, pp. 154c-154d [p. 342-343 of this chapter].) Worst-case shadow effects on Portsmouth Square, in March and September, of this alternative would be similar to those of the project at 8:00 a.m. in March (8:48 a.m. in September). At 8:30 a.m. in March (9:18 a.m. in September), the alternative would newly shade about 20% of the square, compared to 30% for the project. At 9:00 a.m. in March (9:48 a.m. in September), the alternative would not shade the square, compared to about 10% for the project.

"Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project, because the total floor area of the alternative would be about 92% of the proposed project's total floor area. All other effects would be similar to those of the project.

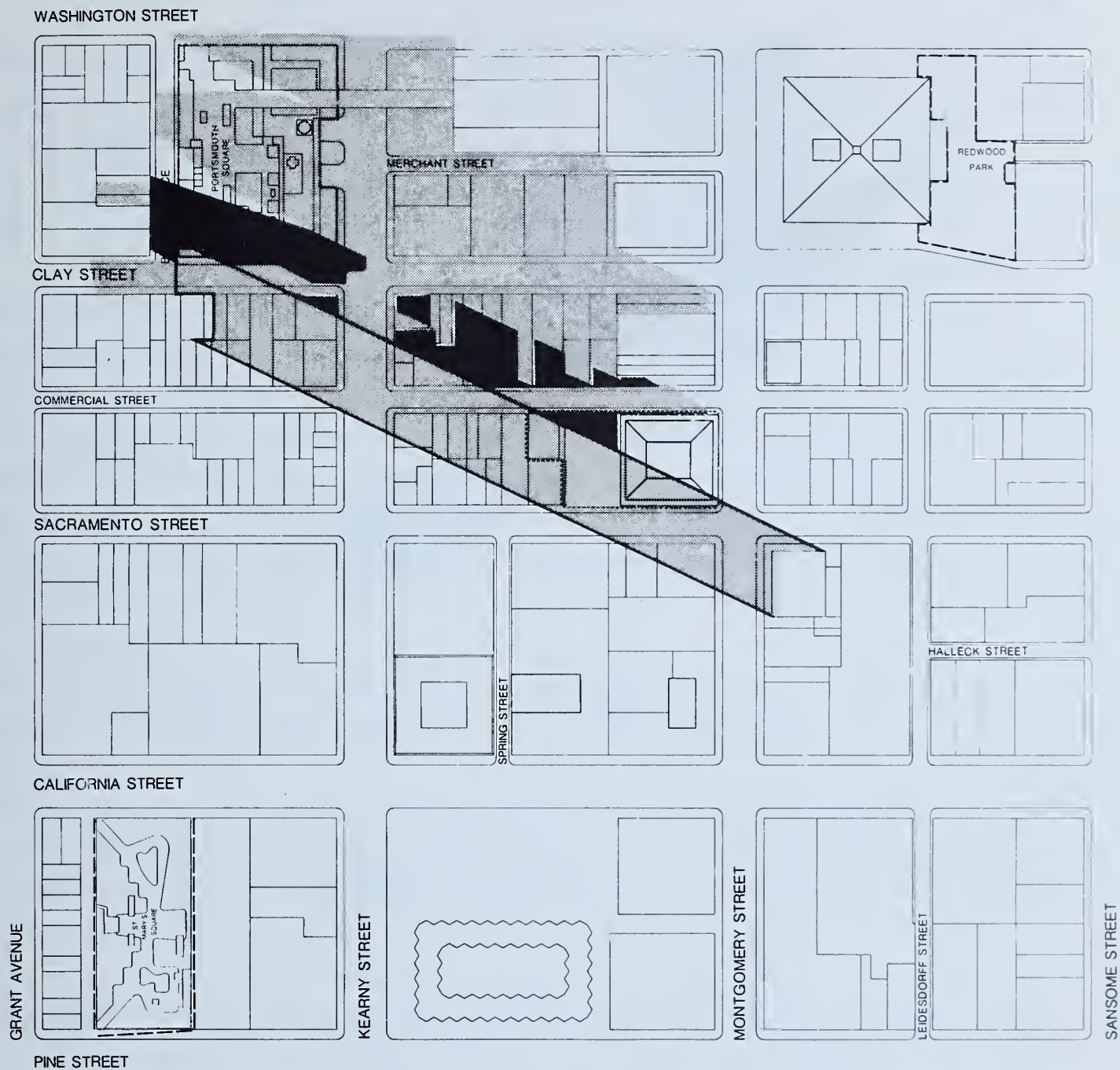
"The project sponsor is considering this alternative, because it would cause fewer shadow effects on Portsmouth Square, compared to the proposed project."

"G. ALTERNATIVE 5: NEW CONSTRUCTION ON LOTS FRONTING MONTGOMERY STREET ONLY

"This alternative would develop a new building on Lots 5, 6A, and 7, the site frontage on Montgomery St. These lots total 7,150 sq. ft. Three buildings, 501-505 Montgomery St., 517-519 Montgomery St., and 527 Montgomery St. would be demolished. Other buildings on the site would be retained. The new building would be 250 ft. and 17 stories tall (compared to 350 ft. and 26 stories for the proposed project), and would have a total floor area of 107,250 sq. ft. (compared to 366,390 sq. ft. for the proposed project) (see Figure 42, p. 152a [p. 327 of this chapter]). The size of the building site, combined with requirements for lobby, elevator, and service space, would preclude provision of ground-floor retail space in the new building.

"Total floor area on the site, for the new and retained buildings, would be about 156,000 gross sq. ft., for an FAR of about 6:1.

"The lower height and bulk of this alternative, compared to that of the project, would be less visible in mid- and long-range views. This alternative



- Existing Shadow
- Under Construction Building Shadow
- Project Shadow (New Shadow Only)
- Project Site
- Open Space

FIGURE 47

Alternative 4 Shadow Pattern -
March/September 21, 8:00 A.M. PST/8:48 A.M. PDT

SOURCE
Skidmore, Owings & Merrill, and Environmental Science Associates, Inc.

VIII. Summary of Comments and Responses

would cast shorter shadows than the project. At 8:00 a.m. in March (8:48 a.m. in September, this alternative would shade the southeasterly corner (less than 5%) of Portsmouth Square, compared to about 33% with the project. By 8:30 a.m. in March (9:18 am. in September) this alternative would not shade the square.

"This alternative would retain seven buildings, all "C" rated, fronting on Commercial St. and on Sacramento St. (615-617 Commercial St.; 627-629 Commercial St.; 653-655 Commercial St.; 616-618 Sacramento St.; 624 Sacramento St., 628-630 Sacramento St.; and 638-640 Sacramento St.). Retention of the seven buildings would maintain the low-rise scale of a greater portion of Commercial St. than would the project. In comparison, the project would retain two buildings, 653-655 Commercial St. and 638-640 Sacramento St.

"The alternative would require one off-street loading space, which would be provided with access from Sacramento St., as with the project.

"Transportation, air quality, energy, employment and housing impacts associated with this alternative would be proportionately less than with the project because total floor area of the alternative would be about 40% of the proposed project floor area.

"(To develop about 250,000 sq. ft. of gross floor area on this portion of the site [as described by the commenter], or a 10:1 FAR, would require a 500-ft., 27-story tower. This would exceed the existing Planning Code 400-ft. height limit and the Downtown-Plan-proposed 250 ft. limit for the site. Such an alternative would also require additional elevator shafts, and larger column sizes and utility shafts, which would reduce usable floor area.)

"The project sponsor has rejected this alternative because it would not permit development of floor area allowed under existing controls or in the proposed Downtown Plan. The alternative would result in usable floor sizes of about 5,000 sq. ft. which, in the sponsor's opinion, would not be efficient or marketable."

VIII. Summary of Comments and Responses

The following paragraphs are added to the end of p. 12, Chapter I, Summary, of the EIR:

"4. PREFERRED ALTERNATIVE

"Alternative 4 would be similar to the proposed project, except that it would be 345 ft. (including a mechanical level) and 25 stories tall, compared to 366 ft. (including a 16-ft. cooling tower) and 26 stories for the project. Total floor area on the site would be about 339,600 sq. ft., for a ratio of total building area to total site area of 13:1, compared to 366,390 sq. ft. and 14:1 for the project.

"The alternative would be less visible and would cast shorter shadows than would the project, because of the lower height. Worst-case shadow effects on Portsmouth Square, in March and September, of this alternative would be similar to those of the project at 8:00 a.m. in March (8:48 a.m. in September). At 8:30 a.m. in March (9:16 a.m. in September), the alternative would newly shade about 20% of the square, compared to 30% for the project. At 9:00 a.m. in March (9:48 a.m. in September), the alternative would not shade the square, compared to about 10% for the project.

Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 92% of that of the proposed project. All other effects would be similar to those of the project.

"5. NEW CONSTRUCTION ON LOTS FRONTING MONTGOMERY STREET ONLY

"Alternative 5 would develop a new building on Lots 5, 6A, and 7, the site frontage on Montgomery St. Seven buildings on the remaining lots would be retained. The new building would be 250 ft. and 17 stories tall, and would have a total floor area of 107,250 sq. ft. Site size and design requirements would preclude provision of ground-floor retail space. Total floor area on the site would be about 156,000 sq. ft., for a ratio of building area to site area of 6:1.

VIII. Summary of Comments and Responses

"The alternative would be less visible and would cast shorter shadows than would the project, because of the lower height and bulk. At 8:00 a.m. in March (8:48 a.m. in September, this alternative would shade the southeasterly corner (less than 5%) of Portsmouth Square. By 8:30 a.m. in March (9:18 a.m. in September) this alternative would not shade the square. The alternative would retain seven C-rated buildings fronting Commercial and Sacramento Sts., compared to two with the proposed project, and would thus maintain the low-rise scale of a greater portion of Commercial St. than the project. Transportation, air quality, energy, employment and housing impacts of this alternative would be proportionately less than those of the project, as the floor area of the alternative would be about 40% of that of the proposed project."

D. STAFF-INITIATED TEXT CHANGES

In Chapter IV., Environmental Impact, Section B., Historic, Architectural and Cultural Resources, p. 53 of the EIR, the following paragraph is added after the first paragraph:

"A plaque on the east wall of 501-505 Montgomery St., placed by the State Department of Parks and Recreation in 1968, notes that the block was the site of the San Francisco branch (established in 1841) of the Hudson's Bay Company. The site is designated State Historic Landmark No. 819. A plaque on the north wall of 517-519 Montgomery St. notes that the site was the location of the Bank of James King of William. His assassination in 1856 touched off the formation of the vigilante committees. The plaque was placed by the Daughters of the American Revolution in 1956. The plaques commemorate history and uses of the site and do not refer to the buildings to which they are attached. The two plaques would be removed and stored during project construction, and replaced on the exterior wall of the proposed new building."

In Chapter IV., Environmental Impact, Section I., Employment, Housing and Fiscal Factors, p. 131e of the EIR, the last sentence of the second full paragraph is revised to read as follows:

"This would be the case only if no new revenue sources were found and the rate of development declined, and/or existing and future developments did not change hands, such that assessed values remained the same for long periods."

In Chapter IV., Environmental Impact, Section H., Energy, as revised in the DEIR Supplement, the third sentence of the first paragraph of p. 39 of the Supplement (EIR, p. 118) is revised to read (changes are underlined):

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"The City Planning Department further estimates that between 1984 and 2000 gas consumption will grow by 470 million cu. ft. per year of which about 210 million cu. ft. per year would be for office uses."

The second paragraph on p. 118 is revised to read:

"PG&E plans to meet increased San Francisco energy demands to the year 2000 are discussed on pp. IV.G.13-14 of the Downtown Plan Draft EIR, which are hereby incorporated by reference."

Footnote /7/ on p. 119 is revised to read:

"/7/ Unpublished building energy consumption data supplied by David Rubin, Department of City Planning, personal communication, January 1984."

In Chapter IV., Environmental Impact, Section I., Housing, Employment and Fiscal Factors, "Residence Patterns and Housing," pp. 43-46 of the DEIR Supplement (EIR, pp. 130a-131d) are revised as discussed below:

There are two major reasons for these revisions: First, the analysis of the project has been revised to allow comparison to cumulative total development according to either the Downtown Plan or the list-based approach. The original DEIR Supplement section focused on cumulative office development. The revised section is now consistent with the cumulative transportation analysis. Second, the analysis has been expanded to provide a broader, regional perspective on residence patterns and the housing market implications of cumulative development.

The DEIR Supplement text beginning under Residence Patterns and Housing on p. 43 (EIR, p. 130a) is revised as follows (revisions are underlined; deletions are also indicated).

P. 43, first paragraph (EIR, p. 130a, third paragraph):

"This section takes a long-term perspective, focusing on changes in downtown ~~office~~ workers living in San Francisco and the housing market implications of downtown growth."

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P. 43, fourth paragraph (EIR, p. 130b, first full paragraph):

"According to the Downtown Plan forecasts, approximately 189,000 C-3 District ~~office~~ workers would be living in San Francisco in 2000. This represents an increase of 30,000 residents employed in the C-3 District ~~offices~~ over the 159,000 estimated for 1984, a 19% increase./20/ Relatively more employed San Franciscans would be employed in the C-3 District. ~~office jobs~~. The percentage (employed San Franciscans holding C-3 District ~~office~~ jobs) would increase from 45.0% in 1984 to 47.5% in 2000. Relatively fewer C-3 District ~~office~~ jobs would be held by San Franciscans. The percentage (C-3 District ~~office~~ jobs held by San Franciscans) would decline from 55.5% in 1984 to 50.2% in 2000. These changes would be the result of cumulative development and employment growth in the C-3 District between 1984 and 2000.

P. 44, beginning with second full paragraph (EIR, p. 130b, second and third paragraphs):

"It is important to understand the difference between the two percentages above. In each case, the same estimate of the number of jobs held by San Francisco residents is compared to an estimate for a larger group: to all employed residents of the City in the first instance and to all C-3 District ~~office~~ employment in the second. The percentages are different since the number of employed residents is different from the number of ~~office~~ jobs. These percentages both describe the same employment situation, but from different perspectives.

"The Downtown Plan forecasts fall within the range of estimates of C-3 District ~~office~~ workers living in San Francisco that was identified by the analysis of Alternatives in the Downtown Plan DEIR. By 2000, the Alternative forecasts range from 189,000 to 193,000 C-3 District workers living in San Francisco. (~~The growth from 1984 to 2000 ranges from 24,000 to 28,000 additional office workers living in the City.~~) The relative comparisons described above apply to all the Alternatives; the percentage of total employed San Franciscans working in C-3 District ~~office~~ jobs in 2000 would be higher than in 1984, while the percentage of C-3 District ~~office~~ jobs held by residents would be lower."

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The last paragraph on p. 44 and the accompanying footnote are deleted, because the information is provided in the section Downtown Office Space on p. 41 (EIR, p. 130) of the DEIR Supplement (EIR, p. 130, third full paragraph). The last sentence comparing the project to the Downtown Plan forecast of office space is added to p. 41, after the second sentence of the second paragraph.

The first two paragraphs and the accompanying footnote on p. 45 are deleted, because the OHPP and 101 Montgomery formulas are project-specific and cannot easily be related to the cumulative totals discussed in this section. The project-specific information calculated using these formulas appears on pp. 121-122 of the DEIR.

The following paragraph and accompanying footnote replace the first two paragraphs and accompanying footnote on p. 45 (EIR, p. 130c), to relate the project to the Downtown Plan cumulative totals presented in the DEIR Supplement:

"The residence patterns of future occupants of the 505 Montgomery project can be estimated using information developed in the Downtown Plan analysis. This approach assumes that employment densities for the building and residence patterns for those working in the building would reflect the average conditions for all similar buildings and occupants in the C-3 District in 2000. According to this approach there would be about 480 people employed in the project who would live in San Francisco. The project would account for about 0.3 percent of all San Franciscans employed in the C-3 District in 2000 under the Downtown Plan forecast./21/"

The section "Estimates Based on the List of Office Projects in Downtown San Francisco," on pp. 45-46 (EIR, p. 130c, paragraphs two through four), is revised as follows, to provide a consistent comparison of the project to cumulative total development using the list-based approach and the Transportation Guidelines, instead of the OHPP and 101 Montgomery formulas. The information on total space included on the list is deleted because it is covered in the Downtown Office Space section on p. 41 of the DEIR Supplement (EIR, p. 130). The first sentence of the last, partial paragraph, relating the project to the total space on the list has been added to p. 41, after the first sentence of the first paragraph (EIR, p. 130, second paragraph).

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"Estimates Based On The List Of Office Projects In Downtown San Francisco. An alternative means of evaluating the cumulative effects of projects such as the proposed 505 Montgomery project is to use the list of all projects that are under construction, approved, or under formal review. (This list is discussed in Appendix C, pp. A-32a to A-32c. The list includes projects throughout the greater downtown, which includes the C-3 District, as well as adjacent areas.) It is possible to calculate from the list the change in the number of downtown workers living in San Francisco associated with this amount of development. Adding this number to the 1984 base estimate of downtown workers residing in San Francisco produces an estimate of total downtown workers living in the City, once all projects on the list were built and occupied. The results from this approach indicate that about 230,000 workers in the greater downtown area would live in San Francisco at that time./22/

"This approach uses data from the 1983 Transportation Guidelines to estimate the residence patterns of future employees in the buildings on the list. Unlike the Downtown Plan forecast approach, this approach incorporates no changes over time in either employment densities or residence patterns. It assumes that current average conditions (reflected in the Transportation Guidelines) would continue throughout the build-out period for the list.

"The project would account for about 0.2% of all downtown workers living in San Francisco when all projects on the list were built and occupied. The project would represent a smaller share of future activity in the greater downtown area than of activity in the C-3 District alone."

The following text replaces the second complete paragraph on p. 46 of the Supplement (EIR, p. 131, first paragraph) of the Supplement, to clarify the differences between the two approaches, particularly related to the analysis of residence patterns:

"Differences In Cumulative Approaches. There are several important differences between the two approaches to cumulative analysis: the Downtown Plan approach of forecasting space and employment and the

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approach of using a list of proposed projects. The first approach incorporates forecasts of new development for all land uses (office, retail, hotel, and housing) and accounts for the demolition and conversion of existing space. The second approach accounts for the net addition of office and retail development. Moreover, the Downtown Plan forecast methodology incorporates changes in economic activity and employment that would occur in the use of existing space, while the list includes the changes accommodated by net new construction and some conversions./23/ The Downtown Plan forecast also includes employment growth, such as building maintenance and construction employment, that is not directly related to the occupancy of space. The Downtown Plan forecast incorporates changes over time in residence patterns, reflecting changes in the regional distribution of population, housing, and employment. The list approach applies relationships derived from current conditions to the future situation, assuming no changes over time. The Downtown Plan approach is currently limited to the C-3 District, while the list covers a larger geographic area. In addition, there is no definite timeframe associated with the list, while the Downtown Plan forecast represents a best estimate of the development likely to be built and occupied from 1984 to 2000. It is because of these differences that the cumulative estimates of future residence patterns under each approach are not comparable. Within each approach, however, the project can be compared to the cumulative totals as described above."

The footnotes on p. 48 of the DEIR Supplement (EIR, pp. 132-133) are revised as follows:

Footnote /19/: The last sentence is deleted.

Footnote /20/ page reference is corrected. The rest of the note is deleted because the residence pattern forecasts have been revised to show total C-3 District employment:

"/20/ Downtown Plan Draft EIR, p. IV.D.67."

Footnote /21/ is replaced:

"/21/ In order to ensure consistency with the cumulative transportation analysis and to respond to comments received requesting information on region-wide impacts, this section does not use the OHPP and 101 Montgomery formulas for estimating the number of workers who would live in

VIII. Summary of Comments and Responses

San Francisco. These formulas are not used in this section because they do not incorporate all of the information required for the cumulative, regional perspective on residence patterns and housing. Specifically, the formulas only provide estimates of office workers living in San Francisco; they do not include factors for estimating workers living in other parts of the region. These formulas are applied to the project in the project-specific impact section of the EIR, on pp. 121-122."

Footnote /22/ is replaced:

"/22/ For the 1984 estimates of workers in the greater downtown area, the C-3 District estimates of employment and residence patterns prepared for the Downtown Plan Draft EIR were used as a base to which order-of-magnitude estimates for that year for the other downtown areas were added. The Transportation Guidelines were used to estimate employment and residence patterns in projects on the March 10, 1984 list for the greater downtown area. The workers associated with these new projects were added to the 1984 base year total estimate."

Footnote /23/, the second and third sentences are revised:

"For example, office employment growth is forecast to exceed the growth of employment that would be accommodated by the development of new office space. For example From 1990 to 2000, more intensified use of existing space to accommodate employment growth would be equivalent to about a 40 percent increase in the net addition of office space forecast for that period."

Footnote /24/ page reference is corrected:

"/24/ This subsection presents a summary of the discussion in the Downtown Plan DEIR (see pp. IV.D.77-IV.D.82 and pp. I.1-I.8)."

The following paragraphs replace the last full paragraph on p. 5 of the Draft EIR Supplement (EIR, pp. 6a-6c), and are added to provided a more complete summary of the regional perspective on residence patterns and housing market implications:

"According to the Downtown Plan forecast, 189,000 C-3 District workers would live in San Francisco in 2000. The 505 Montgomery project would be a part of this total. About 480 people working in this building would live in San Francisco, about 0.3 percent of the total for the C-3 District.

"According to the list-based approach, about 230,000 workers in the greater downtown would live in San Francisco after build-out of the projects on the list. The 505 Montgomery St. project would account for 0.2% of the total.

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"Employment growth accommodated by the project and the many other projects considered in either the Downtown Plan forecast or the list-based analysis has implications for the housing market. These can be summarized as follows:

- "- There would be more people with preferences and increased resources to pay for San Francisco housing, adding to an already strong demand.
- "- The housing supply would not be expanded to completely match the increased demand, for many local and other housing market reasons.
- "- There would be higher prices/rents for San Francisco housing: moderately higher than current levels or, at a minimum, remaining at current levels.
- "- Different households would be affected in different ways.
- "- Generally, those with fewer financial resources to pay for housing would make the most sacrifices in adapting to more competitive market conditions.

"The regional context for future employment and housing is important in forecasting residence patterns and for assessing housing market implications due to employment growth in one part of the region. Considering trends in labor force participation, workers per household, housing production and employment growth throughout the region, future workers in downtown San Francisco would not require much larger shares of the region's housing stock in the future than they do now. In the future, the relationship between downtown workers and other workers competing for housing in the region would be relatively similar to current conditions. As part of total regional employment growth to the year 2000, increases in San Francisco employment can be viewed as contributing to regional housing demand and to a competitive regional housing market with relatively high housing prices and rents."

In Chapter V., Mitigation Measures, p. 136 of the EIR, the mitigation measure for Historic, Architectural and Cultural Resources, proposed as part of the project, is replaced with the following measure:

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"Prior to issuance of a site permit, the project sponsor shall retain an historical archaeologist (or other qualified expert) to perform archival research and site inspection to determine the potential for discovery of cultural or historic artifacts on the project site. Results of this investigation shall be reported to the Environmental Review Officer.

"The Environmental Review Officer in consultation with the Secretary to the Landmarks Preservation Advisory Board and the archaeologist shall determine whether the archaeologist should instruct all excavation and foundation crews on the project site of the potential for discovery of cultural or historic artifacts, and the procedures to be followed if such artifacts are uncovered.

"In the event of high probability of discovery of cultural or historic artifacts, the Environmental Review Officer may require that an archaeologist be present during site excavation and record a daily log of observations. The Environmental Review Officer may also require cooperation of the project sponsor in assisting such further investigations on site as may be appropriate prior to or during project excavation, even if this results in a delay in excavation activities.

"Should cultural or historic artifacts be found during project excavation, the archaeologist would assess the significance of the find, and immediately report to the Environmental Review Officer and the Secretary of the Landmarks Preservation Advisory Board. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

"This maximum of four weeks shall include any other time periods for which the Environmental Review Officer has required a delay in excavation activities."

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Chapter VI., Significant Environmental Effects, p. 145 of the EIR, the second paragraph is revised as follows. The first two sentences are deleted and the paragraph now reads:

"The project would contribute to cumulative traffic and increased Downtown and cumulative passenger loadings on Muni, BART, and other transit carriers."

The material on development trends in San Francisco deleted from this paragraph is discussed in Chapter IV., Environmental Impact, Section J., Growth Inducement, pp. 134-135 of the EIR.

ERRATA

The last paragraph, p. 3 of the DEIR Supplement (EIR, p. 5, second full paragraph), is revised to read as follows (the underlined word is changed):

"Cumulative development by the year 2000 would be expected to decrease the peak-hour intersection Levels of Service at Battery and Washington Sts. from B to C, and at Battery and Clay Sts. from C to D."

In Appendix C, Table C-2, Cumulative Office Development in Downtown San Francisco as of March 10, 1984, pp. A-5 to A-8 of the DEIR Supplement (EIR, pp. 32a-32d), the following corrections are made (changes are underlined):

On EIR p. A-32a, under "Downtown Office Projects Under Formal Review."

Case No. for 220 Green is 8264603.

Block No for for 665 Bush is 288.

On EIR pp. A-32b to A-32c, under "Major Downtown Office Projects, Approved; Not Yet Under Construction:"

Case No. for 50 Osgood Place is 81.583D.

Case No. for 44 Campton Place is 82.87D.

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Block No. for 1581 Bush is 671.

Block No. for 44 Gough is 3504.

Case No. for 774 Tehama is 82.86D.

On EIR p. A-32d, under "Major Downtown Office Projects Under Construction."

Case No. for 955 Front/55 Green is 81.243E.

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Attn: George Nakagaki, Manager

GROUPS AND INDIVIDUALS

AIA
San Francisco Chapter
790 Market St.
San Francisco, CA 94102

Appraisal Consultants
701 Sutter St.
San Francisco, California 94109
Attn: Wayne E. Stiefvater,
President

Asian, Inc.
1610 Bush St.
San Francisco, CA 94109
Attn: Harold Yee

Asian Americans for Equality
759 Jackson St.
San Francisco, CA 94133

Asian Community Center
19 Brenham Place
San Francisco, CA 94108

Asian Law Caucus, Inc.
36 Waverly Place, Suite 2
San Francisco, CA 94108
Attn: Edwin M. Lee

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Asian Neighborhood Design
576 Vallejo St.
San Francisco, CA 94133
Attn: Gilbert Chan

Asian Week Publishing Co.
811 Sacramento St.
San Francisco, CA 94108

Art Blum / Public Relations
627 Commercial St.
San Francisco, CA 94111
Attn: Kathy Gibbs

● Peter L. Bass
111 Monte Ave.
Piedmont, CA 94611

Bay Area Council, Inc.
348 World Trade Center
San Francisco, CA 94111

Bendix Environmental Research, Inc.
1390 Market St., Suite 902
San Francisco, CA 94102

Tony Blaczek
Finance Department
Coldwell Banker
1 Embarcadero Center, 23rd Floor
San Francisco, CA 94111

Blayney-Dyett
Urban & Regional Planners
70 Zoe St.
San Francisco, CA 94103
Attn: Michael V. Dyett

Peter Bosselmann
Environmental Simulation Laboratory
316 Wurster Hall
Berkeley, CA 94720

Brobeck, Phleger, Harrison
One Market Plaza
San Francisco, CA 94105
Attn: Jonnie T. Jacobs, Esq.

Michael Buck
1333 - 35th Ave.
San Francisco, CA 94122

Campeau Corp. of California
681 Market St.
San Francisco, CA 94105
Attn: Jeff Vance

Dale Carlson
369 Pine St., #800
San Francisco, CA 94104

Chickering & Gregory
3 Embarcadero Center
23rd Floor
San Francisco, CA 94111
Attn: Kent Soule

Chinatown Coalition for Better Housing
615 Grant Ave.
San Francisco, CA 94108

Chinatown Neighborhood Center, Inc.
615 Grant Ave., Second Floor
San Francisco, CA 94108

Chinatown Neighborhood Improvement
Resource Center
615 Grant Ave., Second Floor
San Francisco, CA 94108
Attn: Gordon Chin

Chinatown Transportation Research and
Improvement Program
615 Grant Ave.
San Francisco, CA 94108

Chinese for Affirmative Action
121 Waverly Place
San Francisco, CA 94108
Attn: Henry Der

Chinese American Citizen's Alliance
1044 Stockton St.
San Francisco, CA 94105

Chinese American Institute of Engineers
146 Waverly Place
San Francisco, CA 94108

Chinese Chamber of Commerce
730 Sacramento St.
San Francisco, CA 94108
Attn: George Chinn

- Chinese Community Housing Corporation
615 Grant Ave.
San Francisco, CA 94108
Attn: Howard Gong, Development
Director
- Chinese Consolidated Benevolent
Association
843 Stockton St.
San Francisco, CA 94108
- Chinese Democratic Club
915A Grant Ave.
San Francisco, CA 94108
- Chinese Historical Society
17 Adler St.
San Francisco, CA 94108
- Chinese Newcomers Service Center
816 Sacramento St.
San Francisco, CA 94108
- Cogswell College Library
600 Stockton Street
San Francisco, CA 94108
- Commercial News Publishing Co.
125 Twelfth Street
San Francisco, CA 94103
Attn: Annette M. Granucci
- Committee for Better Parks and
Recreation Facilities of Chinatown
450 Grant Ave., Suite 222
San Francisco, CA 94108
Attn: Beverly Karnatz
- Joseph Cortiz
2853 22nd St.
San Francisco, CA 94110
- Cushman & Wakefield
555 California, Suite 2700
San Francisco, CA 94104
Attn: Calvin Dare
- DKS Associates
1419 Broadway, Suite 700
Oakland, CA 94612
- Downtown Association
582 Market St.
San Francisco, CA 94194
Attn: Lloyd Pflueger
- Downtown Senior Social Serives
295 Eddy St.
San Francisco, CA 94102
- Environmental Impact Planning Corp.
319 Eleventh St.
San Francisco, CA 94103
- Environmental Planning & Research, Inc.
649 Front St.
San Francisco, CA 94111
Attn: Leslie de Boer
- Farella, Brown & Martel
235 Montgomery St.
San Francisco, CA 94104
- Fotolithics
505 Montgomery St.
San Francisco, CA 94111
Attn: Sue Bratt
- The Foundation for San Francisco's
Architectural Heritage
2007 Franklin St.
San Francisco, CA 94109
Attn: Grant Dehart, Executive
Director
- Friends of the Earth
1045 Sansome St., #404
San Francisco, CA 94111
Attn: Connie Parrish
- Charles T. Gill
The Aspen Group West, Inc.
505 Sansome, Suite 1005
San Francisco, CA 94111
- Gary Goss
434 Duncan St.
San Francisco, CA 94131
- Annette M. Granucci
Commercial News Publishing Co.
125 Twelfth Street
San Francisco, CA 94103

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San Francisco, CA 94102
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San Francisco, CA 94111

- Douglas Hack
Marketing Research Consultants
2720 Arden Way
Sacramento, CA 95820

Donald Head & Associates
109 Minna Street, #293
San Francisco, CA 94105

Heller, Ehrman, White & McAuliffe
44 Montgomery St., 32nd Floor
San Francisco, CA 94104
Attn: Robert L. Gibney, Jr.

Ms. Sue Hestor
4536 - 20th St.
San Francisco, CA 94114

Carl Imparato
1205 Garfield
Albany, CA 94705

Jefferson Associates, Inc.
683 McAllister Street
San Francisco, CA 94102
Attn: Gordon Jacoby

David Jones
241 Bartlett Ave.
San Francisco, CA 94110

KABL
632 Commercial St.
San Francisco, CA 94111
Attn: William Clark,
Station Manager

Knowlton Realty Ltd.
Suite 2720, Embarcadero Center
San Francisco, CA 94111
Attn: John E. Bonin

Paula Lamb
822 Masonic Ave.
San Francisco, CA 94117

- Bette Wallace Landis
94 Estrada Court
San Francisco, CA 94127

Lee & Fan
Architecture & Planning, Inc.
580 Market St., Suite 300
San Francisco, CA 94104
Attn: Robert Fan, Jr.

League of Women Voters
12 Geary St., Room 605
San Francisco, CA 94108

Legal Assistance to the Elderly
333 Valencia St.
San Francisco, CA 94103
Attn: Brent Kato

- Francesco Lettieri
Mr. Submarine, Inc.
500 Presidio Ave.
San Francisco, CA 94111

Lincoln Property Company
220 Sansome St.
San Francisco, CA 94104
Attn: David Capron

Doug Longear
Finance Department
Coldwell Banker
1 Embarcadero Center, 23rd Floor
San Francisco, CA 94111

Marathon U.S. Realities, Inc.
595 Market Street, Suite 1330
San Francisco, CA 94105
Attn: Rolf Wheeler

- Bruce Marshall
553 Duboce St.
San Francisco, CA 94117

- Lilia Medina
21 Porter St.
San Francisco, CA 94110

Robert Meyers Associates
582 Market St., Suite 1208
San Francisco, CA 94104

Leland S. Meyerzove
KP00 - FM
P.O.Box 6149
San Francisco, CA 94120

- Daniel O'Banion
629 Commercial St.
San Francisco, CA 94111

Pacific Gas & Electric
77 Beale St., #2429
San Francisco, CA 94104

Kay Pachtner
Consumer Action
1417 Irving St.
San Francisco, CA 94122

Pacific Telephone & Telegraph
140 New Montgomery St.
San Francisco, CA 94105

Mark Paez
1651 Holloway Ave.
San Francisco, CA 94132

Pillsbury, Madison & Sutro
PO Box 7800
San Francisco, CA 94120
Attn: Susan Pearlstine

Planning Analysis and Development
530 Chestnut St.
San Francisco, CA 94133
Attn: Gloria Root

Mrs. G. Bland Platt
339 Walnut St.
San Francisco, CA 94118

Charles Hall Page and Associates
364 Bush St.
San Francisco, CA 94104

RB International Services
9 Boston Ship Plaza
San Francisco, Ca 94111
Attn: Rita Dorst

David P. Rhoades
120 Montgomery St., Suite 1600
San Francisco, CA 94104

San Francisco Beautiful
41 Sutter St.
San Francisco, CA 94104
Attn: Mrs. H. Klussman, President

San Francisco Building and
Construction Trades Council
400 Alabama St., Room 100
San Francisco, CA 94110
Attn: Stanley Smith

San Francisco Chamber of Commerce
465 California St.
San Francisco, CA 94105
Attn: Richard Morten

San Francisco Convention & Visitors
Bureau
201 Third St., Suite 900
San Francisco, CA 94103
Attn: George Kirkland

San Francisco Ecology Center
13 Columbus Ave.
San Francisco, CA 94111

San Francisco Forward
690 Market St.
San Francisco, CA 94104
Attn: Frank Noto

San Francisco Junior Chamber of
Commerce
251 Kearny St.
San Francisco, CA 94108

San Francisco Labor Council
1855 Folsom St.
San Francisco, CA 94103
Attn: Bernard Speckman

X. Distribution List

San Francisco Muni Coalition
Box 42443
San Francisco, CA 94142
Attn: Bruce Marshall

San Francisco Planning and Urban
Research Association
312 Sutter St.
San Francisco, CA 94108

San Franciscans for Reasonable Growth
241 Bartlett St.
San Francisco, CA 94110
Attn: Frank Noto

San Francisco Tomorrow
942 Market, Room 505
San Francisco, CA 94102
Attn: Tony Kilroy

John Sanger & Associates
2340 Market St.
San Francisco, CA 94114

Senior Escort Program
South of Market Branch
814 Mission St.
San Francisco, CA 94103
Attn: Neighborhood Coordinator

Sierra Club
530 Bush St.
San Francisco, CA 94105
Attn: Becky Evans

Kent E. Soule
1180 Filbert Street, Room 204
San Francisco, California 94109

Tenants & Owners Development
Corporation
230 Fourth St.
San Francisco, CA 941035
Attn: John Elberling

- Albert Tetzlaff
191 Dalewood Way
San Francisco, CA 94127

Tosta & Browning
333 Market St., Suite 2230
San Francisco, CA 94105
Attn: Timothy A. Tosta

Steven Weicker
899 Pine St., #1610
San Francisco, CA 94108

Whisler-Patri
590 Folsom Street
San Francisco, CA 94105
Attn: Marie Zeller

- Ling Chi Wong
Chairman, Board of Directors
Chinese for Affirmative Action
121 Waverly Place
San Francisco, CA 94108

LIBRARIES

Institute of Governmental Studies
1209 Moses Hall
University of California
Berkeley, CA 94720

Environmental Protection Agency Library
215 Fremont St.
San Francisco, CA 94105
Attn: Jean Circiello

Hastings College of the Law Library
198 McAllister St.
San Francisco, CA 94102

San Francisco Public Library (2 cc)
Main Branch, Documents Section
208 Larkin St.
San Francisco, CA 94102
Attn: Faith Van Liere

San Francisco Public Library
Business Branch
530 Kearny St.
San Francisco, CA 94104

Government Publications Department
San Francisco State University
1630 Holloway Ave.
San Francisco, CA 94132

Government Documents Section
Stanford University
Stanford, CA 94305

NEIGHBORING PROPERTY OWNERS

Bank of Canton Of California
626 Clay St.
San Francisco, CA 94108

Chinese Community Housing Corp.
615 Grant Ave.
San Francisco, CA 94108

David S. Chu
2316 15th Ave.
San Francisco, CA 94116

Dortmunder Financial Company
c/o Golden Crest Properties
3410 Geary St., #314
San Francisco, CA 94118

Paul B. Fay, Jr.
c/o Fay Improvment Co.
3766 Clay St.
San Francisco, CA 94118

Kam Chan Overseas Inc.
c/o Lew & Fong
626 Grant Ave., #202
San Francisco, CA 94104

The Lurie Company
555 California St., #5100
San Francisco, CA 94104

Harriet E. Redinger
615 Sacramento St.
San Francisco, CA 94111

Walter Rupp
c/o Peter Wertheimer
5 Third St.
San Francisco, CA 94103

Utah International Inc.
550 California St.
San Francisco, CA 94108

Yok Jun Wong
1374 Pacific Ave.
San Francisco, CA 94109

MEDIA

San Francisco Bay Guardian
2700 19th St.
San Francisco, CA 94110
Attn: Patrick Douglas, City Editor

San Francisco Chronicle
925 Mission St.
San Francisco, CA 94103
Attn: Evelyn Hsu

San Francisco Examiner
Box 7260
San Francisco, CA 94120
Attn: Gerald Adams

San Francisco Progress
851 Howard St.
San Francisco, CA 94103
Attn: E. Cahill Mahoney

The Sun Reporter
1366 Turk St.
San Francisco, CA 94115

Tenderloin Times
146 Leavenworth Street
San Francisco, CA 94102
Attn: Rob Waters

XI. Certification Resolution

● XI. CERTIFICATION RESOLUTION

File No. 82.463EC
Address: 505 Montgomery Street

SAN FRANCISCO

CITY PLANNING COMMISSION

MOTION NO. 10049

ADOPTING FINDINGS RELATED TO THE CERTIFICATION OF A FINAL ENVIRONMENTAL IMPACT REPORT FOR A PROPOSED OFFICE BUILDING LOCATED AT 505 MONTGOMERY STREET.

MOVED, that the San Francisco City Planning Commission ("Commission") hereby CERTIFIES the Final Environmental Impact Report identified as 82.463E based upon the following findings:

- 1) The City and County of San Francisco, acting through the Department of City Planning ("Department") fulfilled all procedural requirements of the California Environmental Quality Act (Cal. Pub. Res. Code Section 21000 et seq., "CEQA"), the State CEQA Guidelines (Cal. Admin. Code Title 14, Section 15000 et seq., "CEQA Guidelines") and Chapter 31 of the San Francisco Administrative Code ("Chapter 31").
 - a. The Department determined that an EIR was required and provided public notice of the determination by publication in a newspaper of general circulation on January 7, 1983.
 - b. On November 25, 1983, the Department published the Draft Environmental Impact Report ("DEIR") and provided public notice in a newspaper of general circulation of the availability of the DEIR for a public review and comment period of 48 days and of the date and time of the City Planning Commission public hearing on the DEIR; the notice was mailed to the Department's list of persons requesting such notice.
 - c. Notices of availability of the DEIR and of the date and time of the public hearing were posted near the project site by Department staff on November 28, 1983.
 - d. On November 28, 1983, copies of the DEIR were mailed or otherwise delivered to a list of persons requesting it, to those noted on the distribution list in the DEIR, to adjacent property owners, and to other government agencies.
 - e. Notice of Completion was filed with the State Secretary of Resources on November 28, 1983.
 - f. The City Planning Commission held a duly advertised public hearing on said Draft Environmental Impact Report on January 12, 1984, at which opportunity was given for, and public comment received on the DEIR.
 - g. On April 27, 1984, the Department published a Supplement (hereinafter "Supplement") to the Draft Environmental Impact Report updating the DEIR cumulative analyses to March 1984, describing results of analyses in the Downtown Plan DEIR, as well as results of cumulative analysis using the list-based method. The Supplement presented revised analysis of cumulative effects under the categories of transportation, air quality, housing, office space, and energy. Subjects not included

XI. Certification Resolution

CITY PLANNING COMMISSION

File No. 82.463EC
Address: 505 Montgomery Street
Motion No. 10049
Page Two

in the Supplement were either focused out of the DEIR or were unaffected. The Department provided public notice in a newspaper of general circulation of the availability of said Supplement for a public review and comment period of 30 days. The notice was mailed to the Department's list of persons requesting such notice.

- h. On April 27, 1984, copies of the Supplement were mailed or otherwise delivered to a list of persons requesting it, to those noted in the distribution list in the Supplement, to adjacent property owners, and to other government agencies, the latter both directly and through the State Clearinghouse.
 - i. Notice of Completion of said Supplement was filed with the Secretary of Resources via the State Clearinghouse on April 27, 1984.
- 2) The Department prepared responses to comments on environmental issues received at the public hearing and in writing during the public review period for the DEIR and the Supplement, prepared additions to the text of the DEIR and the Supplement in response to comments received based on additional information that became available during the public review period, and corrected errors. This material was presented in a "Draft Summary of Comments and Responses", published on June 21, 1984, was distributed to the Commission and to all parties who commented on the DEIR, and was available to others upon request at Department offices.
 - 3) A Final Environmental Impact Report has been prepared by the Department, based upon the Draft Environmental Impact Report, the Supplement, any consultations and comments received during the review process, any additional information that became available, and the Summary of Comments and Responses, all as required by law.
 - 4) Project Environmental Impact Report files have been made available for review by the City Planning Commission and the public and these files are part of the record before the Commission.
 - 5) On June 28, 1984, the Commission reviewed the Final Environmental Impact Report and found that the contents of said report and the procedures through which the Final Environmental Impact Report was prepared, publicized and reviewed comply with the provisions of the California Environmental Quality Act, the Guidelines of the Secretary for Resources and Chapter 31 of the San Francisco Administrative Code.
 - 6) Project sponsor has indicated that the presently preferred alternative is that described in the Environmental Impact Report as Alternative 4, Preferred Alternative.
 - 7) The City Planning Commission hereby does find that the Final Environmental Impact Report concerning 82.463E: 505 Montgomery Street is adequate, accurate and objective, and that the Summary of Comments and Responses contains no significant revisions to the Draft Environmental Impact Report plus Supplement and does hereby CERTIFY THE COMPLETION of said final Environmental Impact Report in compliance with the California Environmental Quality Act and the State Guidelines.

XI. Certification Resolution

CITY PLANNING COMMISSION

File No. 82.463EC
Address: 505 Montgomery Street
Motion No. 10049
Page Three

- 8) The Commission, in certifying the completion of said Final Environmental Impact Report, does hereby find that the project described in the Environmental Impact Report, and the proposed project to be presented to the Commission for consideration and approval described as Alternative 4, Preferred Alternative, in the Environmental Impact Report, will have a significant effect on the environment in that either would contribute to cumulative traffic increases Downtown and cumulative passenger loadings on Muni, BART, and other transit carriers.

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission on June 28, 1984.

Lee Woods, Jr.
Secretary

AYES : Commissioners Karasick, Klein, Rosenblatt, Salazar, Wright

NOES : Commissioner Bierman

ABSENT : Commissioner Nakashima

ADOPTED: June 28, 1984

XII. APPENDICES

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NOTICE THAT AN
ENVIRONMENTAL IMPACT REPORT
IS DETERMINED TO BE REQUIRED

Date of this Notice: January 7, 1983

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister St. - 5th Floor, San Francisco CA 94102

Agency Contact Person: Carol Roos

Tel: (415) 558-5260

Project Title: 82.463E:
505 Montgomery Street
Office Building

Project Sponsor: The Empire Group

Project Contact Person: Martin E. Brown

Project Address: 505 Montgomery Street

Assessor's Block(s) and Lot(s): Lots 5, 6, 6A, 7, 8, 9, 11, 27 and 28 in Assessor's
Block 227
City and County: San Francisco

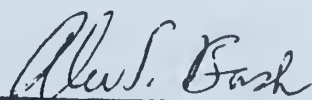
Project Description: Retention of three buildings at 638-640 Sacramento St.:
653-655 Commercial St.; and 627-629 Commercial St. Demolition of six buildings:
construction of a 28-story, 416-foot-tall building including about 309,184 gross
sq. ft. of office; 10,000 sq. ft. of retail, 70 parking spaces, with loading
facilities off Sacramento St. Buildings to be demolished include 501-505 Montgomery St.
(610 Sacramento St.); 519 and 527 Montgomery St; 618 and 624 Sacramento St; and
615 Commercial St.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL
IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the
Guidelines of the State Secretary for Resources, Sections 15081 (Determining Signi-
ficant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to
Prepare an EIR), and the following reasons, as documented in the Initial Evalua-
tion (initial study) for the project, which is on file at the Department of City
Planning:

Please see the attached Initial Study.

Deadline for Filing of an Appeal of this Determination to the City Planning Commis-
sion: January 17, 1983.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a
\$35.00 filing fee.


Alec S. Bash, Environmental Review Officer

I. PROJECT DESCRIPTION

The Empire Group proposes to construct a 28-story office building on a 24,911-sq.-ft. site in Assessor's Block 227 fronting on Montgomery, Sacramento, and Commercial Sts (see Figure 1, p. 3). An office tower would be constructed on a 13,200-sq.-ft. portion of the site (Lots 5, 6, 6A, 7, 8 and 9). The remaining 11,711 sq. ft. of the site (Lots 11, 27 and 28) contains three buildings that would be retained. The project description in this Initial Study is based on use of the development rights associated with the latter lots for development on the former lots. The project site is on the block bounded on the north by Clay St., on the south by Sacramento St., on the west by Kearny St. and on the east by Montgomery St, and split by Commercial St.

The nine buildings on the site contain retail, banking, restaurant and office uses. Six of these buildings, described as follows, would be demolished: Lot 5 at the corner of Montgomery and Commercial Sts. is occupied by a two-story building which contains a restaurant on the ground floor and offices on the second floor. Lot 6A is a two-story building which contains a graphic artist studio and a bar. Lot 7 at the corner of Montgomery and Sacramento is occupied by a four-story building containing a restaurant, bank, optician, and offices. Lot 8 at 618 Sacramento St. is occupied by a three-story building which contains a restaurant on the ground floor and offices on upper floors. Lot 9 at 624 Sacramento St. is two stories and is occupied by a restaurant. Lot 6 at 615 Commercial St. is occupied by a two-story building containing a hair salon and offices.

The project site is zoned C-3-0 (Downtown Office); Lots 5, 6, 6A, 7, 8, 9 and 28 are in a 400-I Height and Bulk district and Lots 11 and 27 are in a 320-I Height and Bulk district. The total allowable floor area ratio (FAR) for the site is 14:1, making the total allowable floor area for the entire site 348,754 gross sq. ft. Buildings that would remain in the site have a floor area of approximately 29,400 gross sq. ft., and the proposed building would have a floor area of 319,184 gross sq. ft., for a total project site floor area of 348,584 gross sq. ft.

The 28-story building would be 416 ft. high, consisting of a stepped back tower and a 16 ft. mechanical penthouse (see Figure 2, p. 4). The tower would include 309,184 gross sq. ft. of office space and about 10,000 gross sq. ft. of retail space at ground level. Up to 70 on-site parking spaces would be provided. Off-street loading facilities would be provided with access from Sacramento St. The office entrance to the building would be on Montgomery St.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

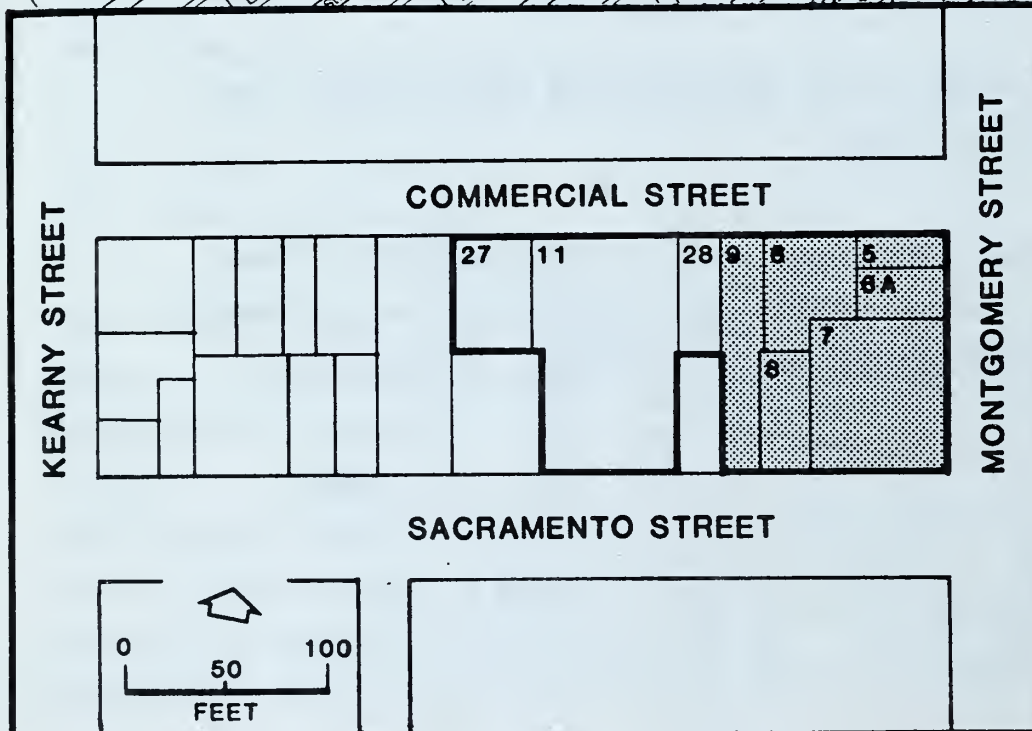
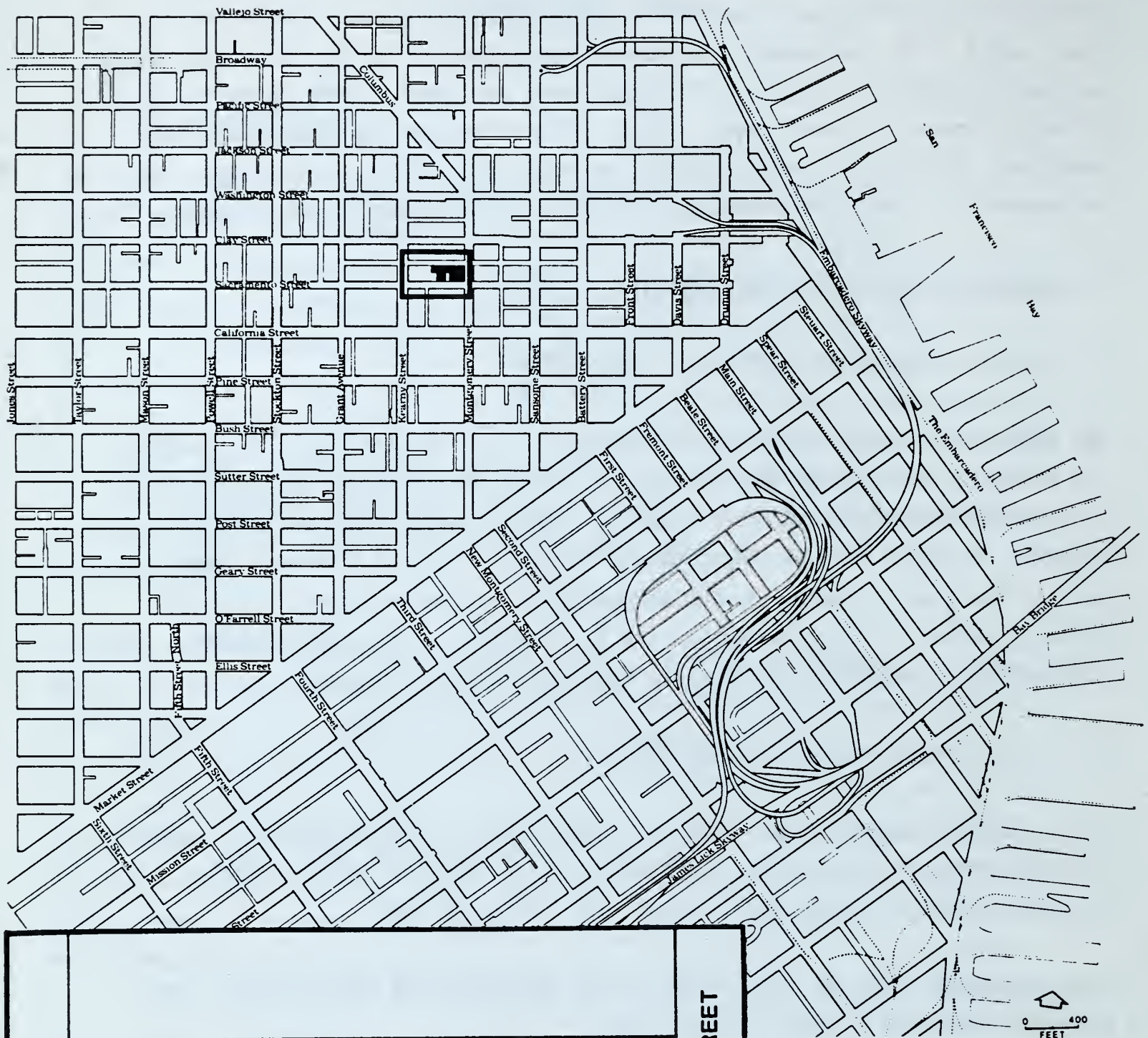
The 505 Montgomery St. project is examined in this Initial Study to identify its potential effects on the environment. Some effects have been determined to be potentially significant. Potential impacts which require further analysis in an EIR include urban design factors, wind and shadows; visual quality and views affected by the project; housing demand generated by the project; effects on transportation and circulation; noise impacts during construction; cumulative air quality impacts; and energy demand.

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

Some potential environmental effects would either be insignificant or would be mitigated through measures incorporated into the project design. These require no further environmental analysis. They include:

Land Use Compatibility: The project would be consistent with existing and proposed land uses in the C-3-0 district.

Noise: After completion, project operation would not perceptibly increase noise levels in the project vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance and the Noise Guidelines of the San Francisco Comprehensive Plan.

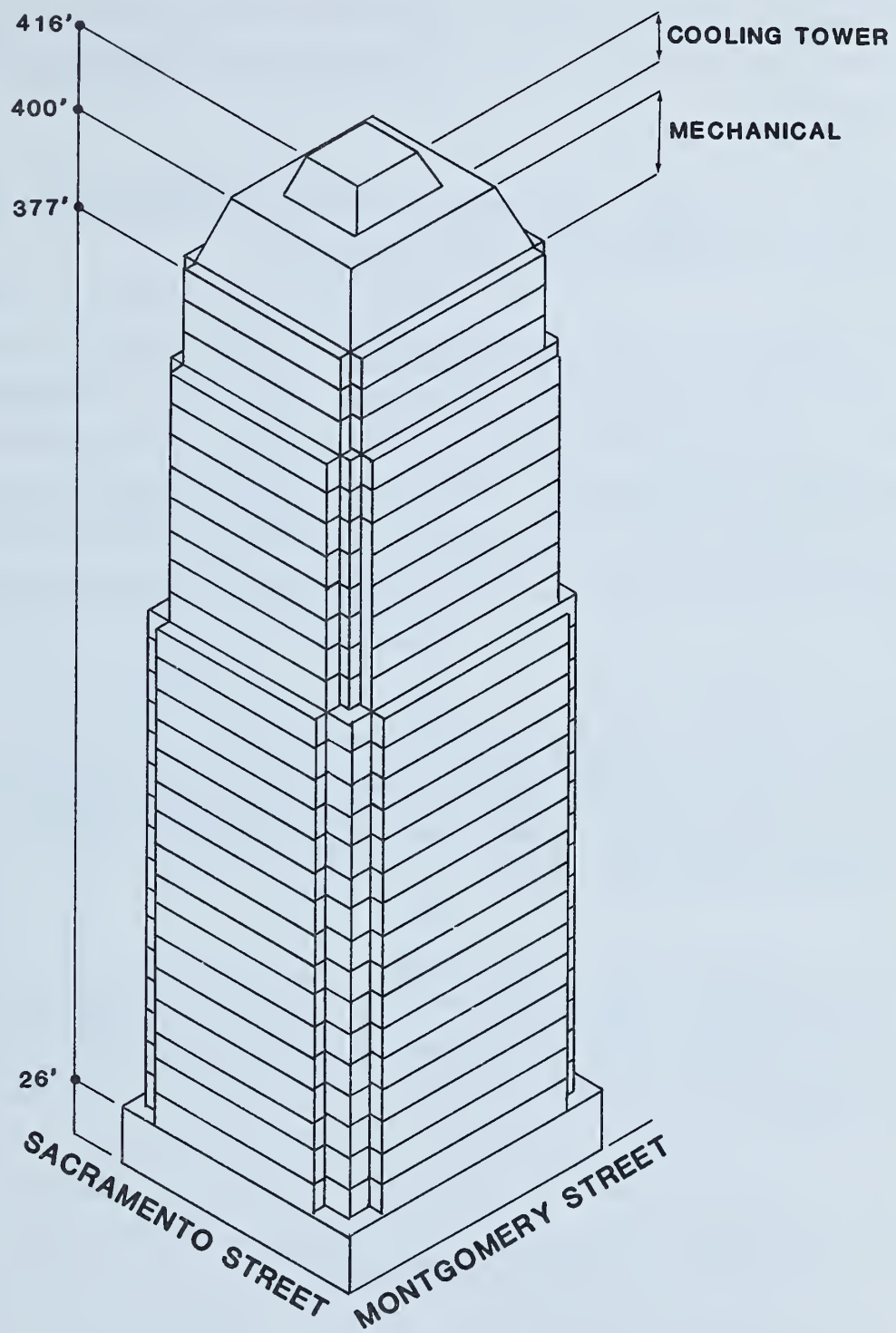


ABOVE:
PROJECT LOCATION

LEFT:
PROJECT SITE
LOTS TO BE DEVELOPED
WITH NEW CONSTRUCTION

FIGURE 1: SITE LOCATION

SOURCE: ENVIRONMENTAL
SCIENCE ASSOCIATES, INC.



SOURCE: SKIDMORE, OWINGS & MERRILL

FIGURE 2: PROJECT ELEVATION

Air Quality During Construction: The project sponsor has agreed to a mitigation measure (see p. 18) which would decrease particulates and emissions from construction equipment during the construction period.

Utilities and Public Services: Increased demand for public services and utilities attributable to the project would not require additional personnel or equipment.

Biology: The project would have no direct effect on plant or animal life. The site is presently occupied by buildings.

Land (topography, soils, geology)/Water: Underlying materials would provide adequate foundation support and seismic stability. A detailed geotechnical report, to be prepared for the project sponsor, would determine the need for dewatering or pile driving. The project sponsor would follow the recommendations made in the geotechnical report, for any excavation or construction on the site and would incorporate other mitigation measures on p. 19.

Hazards: The site and the project would neither cause nor be affected by hazardous uses or health hazards. See p. 19 for a measure to be implemented to ensure coordination between the City's emergency planning activities and the project's emergency plan.

Cultural Resources: No significant subsurface resources are expected to be encountered during construction. See p. 19 for a mitigation measure that would be implemented by the project sponsor to protect any potential resources on the site.

III. ENVIRONMENTAL EVALUATION CHECKLIST

A. GENERAL CONSIDERATIONS

1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?

<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
	X			

- | | <u>Yes</u> | <u>Maybe</u> | <u>No</u> | <u>N/A</u> | <u>Disc.</u> |
|--|------------|--------------|-----------|------------|--------------|
| 2. Would the project require a variance, or other special authorization under the City Planning Code? | _____ | _____ | <u>X</u> | _____ | _____ |
| 3. Would the project require approval of permits from City Departments other than the Department of City Planning or the Bureau of Building Inspection, or from Regional, State or Federal Agencies? | _____ | _____ | <u>X</u> | _____ | _____ |
| 4. Would the project conflict with adopted environmental plans and goals? | _____ | <u>X</u> | _____ | _____ | _____ |

The above matters require discussion in the project EIR.

B. ENVIRONMENTAL IMPACTS

- | | <u>Yes</u> | <u>Maybe</u> | <u>No</u> | <u>N/A</u> | <u>Disc.</u> |
|--|------------|--------------|-----------|------------|--------------|
| 1. <u>Land Use.</u> Would the proposed project: | | | | | |
| a. Be different from surrounding land uses? | _____ | _____ | <u>X</u> | _____ | <u>X</u> |
| b. Disrupt or divide the physical arrangement of an established community? | _____ | _____ | <u>X</u> | _____ | <u>X</u> |

The project site is located in the northwest portion of the San Francisco Financial District. The northern boundary of the Financial District is Washington St., two blocks north of the project site, and the western boundary is Kearny St., one block west of the project site.

Banking and office uses predominate along Montgomery St. north and south of the project site. The Financial District includes much of the City's recent office development, generally with retail at ground level. The Transamerica Pyramid and the 601 Montgomery St. building are located one block to the northeast and one block north of the site, respectively. The 456 Montgomery St. building is under construction diagonally across the street from the site. The Bank of Canton building is approved for development just north (across Commercial St.) of the project. All of these buildings presently contain or would contain office uses along with some retail uses. Commercial St. in the project block contains mixed-use development with ground floor retail uses and office or residential uses on upper floors. The project area east of the site is generally more intensively developed than the area to the west.

The project would be similar in use to surrounding land uses and would not disrupt the physical arrangement of an established community.

This topic will not be discussed in the project EIR. Scale of the development is mentioned below.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
2. <u>Visual Quality and Urban Design.</u> Would the proposed project:					
a. Obstruct or degrade any scenic view or vista open to the public?		X			X
b. Reduce or obstruct views from adjacent or nearby buildings?	X				X
c. Create a negative aesthetic effect?		X			X
d. Generate light or glare affecting other properties?			X		X

A building of this size could obstruct views, reduce views from nearby buildings, or create a negative aesthetic effect. The proposed 28-story building would be similar in scale to new high-rise office development in the Financial District and taller than development west of the site which consists primarily of low-scale buildings. No highly reflective, mirrored glass would be used in the project. These matters will be discussed in the project EIR.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
3. <u>Population/Employment/Housing.</u> Would the proposed project:					
a. Alter the density of the area population?	X				X
b. Have a growth-inducing effect?		X			X
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	X				X
d. Create or eliminate jobs during construction and operation and maintenance of the project?	X				X
e. Create an additional demand for housing in San Francisco?	X				X

Provision of new office space would increase daytime density of the area population, might induce growth and would be expected to create a housing demand. Present businesses located on the lots proposed for construction would be displaced. It has not yet been determined if remaining site buildings would be rehabilitated or remodeled; if they were rehabilitated or remodeled, there would be additional displacement of businesses. No housing is located on the site. These matters will be discussed in the project EIR.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
4. <u>Transportation/Circulation.</u> Would the construction or operation of the project result in:					
a. Change in use of existing transportation systems?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>
c. Effect on existing parking facilities, or demand for new parking?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
d. Alteration to current patterns of circulation or movement of people and/or goods?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
g. Construction of new public roads?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>

Increased employment at the site would increase demand on existing public and private transportation systems. The project would generate approximately 900 peak-hour trips and 4,600 daily trips. Project-related impacts and cumulative transportation and circulation impacts will be analyzed and described in the project EIR. No new public roads would be constructed as a result of the project.

5. Noise.

- a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area?
- b. Would existing noise levels impact the proposed use?
- c. Are Title 25 Noise Insulation Standards applicable?

Yes Maybe No N/A Disc.

_____	_____	<u>X</u>	_____	<u>X</u>
_____	_____	<u>X</u>	_____	<u>X</u>
_____	_____	<u>X</u>	_____	<u>X</u>

Project Construction

Project construction would require about 22 months and would involve demolition, site grading and construction of the proposed structure. Residential hotels and a radio station are located nearby. Construction noise impacts will be analyzed in the project EIR.

Project Operation

The noise environment of the site, like all of downtown San Francisco, is dominated by vehicular traffic noise. The Environmental Protection Element of the San Francisco Comprehensive Plan indicates a day-night average noise level (Ldn) of 75 dBA on Montgomery and Sacramento Sts. adjacent to the site in 1974./1,2/ The Environmental Protection Element contains guidelines for determining the compatibility of various land uses with different noise environments. For office uses the guidelines recommend no special noise control measures in an exterior noise environment up to an Ldn of 70 dBA. For the 75 dBA noise level, the guidelines recommend an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. The project sponsor has indicated that noise insulation measures would be included as part of the design (see p. 20). The proposed structure would not include housing, so Title 25 Noise Standards would not be applicable.

Project operation would not result in noise levels greater than those presently existing in the area. The amount of traffic generated by the project during any hour of the day, and cumulative traffic increases at the

time of project completion, would cause traffic noise levels to increase by less than one dBA. To produce a detectable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development.

Mechanical equipment noise is regulated by the San Francisco Noise Ordinance, San Francisco Municipal Code, Section 2909, "Fixed Source Noise Levels," with which the project sponsor would be required to comply. The project site and surrounding area are zoned C-3-0. In this zone, the ordinance limits equipment noise levels at the property line to 70 dBA between 7 a.m. and 10 p.m. and 60 dBA between the hours of 10 p.m. and 7 a.m. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the noise environment at the site. The project engineer and architect would include design features in the building to limit mechanical equipment noise levels to 60 dBA. As equipment noise would be limited to 60 dBA to meet the nighttime limit, it would not be perceptible within the sound-level context of the project. Further discussion of operational noise will not be included in the EIR.

NOTES - Noise

/1/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.

/2/ Ldn, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
6. <u>Air Quality/Climate.</u> Would the proposed project result in:					
a. Violation of any ambient air quality standard or contribution to an existing air quality violation?	_____	<u>X</u>	_____	_____	<u>X</u>
b. Exposure of sensitive receptors to air pollutants?	_____	_____	<u>X</u>	_____	_____

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
c. Creation of objectionable odors?	_____	_____	<u>X</u>	_____	_____
d. Burning of any materials including brush, trees, or construction materials?	_____	_____	<u>X</u>	_____	_____
e. Alteration of wind, moisture or temperature (including sun shading effects), or any change in climate, either locally or regionally?	<u>X</u>	_____	_____	_____	<u>X</u>

Air quality data collected by the Bay Area Air Quality Management District (BAAQMD) at its San Francisco monitoring station shows that San Francisco infrequently exceeds the ambient air quality standards for ozone, carbon monoxide, and total suspended particulates. Climatic conditions in San Francisco allow rapid dispersal of air pollutants, so that local stationary sources of emissions rarely create a measurable impact at monitoring stations.

Project Construction

Demolition, grading and other construction activities would affect local air quality for approximately 22 months, causing a temporary increase in particulate dust and hydrocarbon emissions. These emissions would be carried by prevailing winds (west, northwest and southwest) and probably would not cause emission standards to be exceeded at the monitoring station (located about 2.5 miles south of the project site). Without mitigation, construction-generated dust might cause exceedances of the particulate standard in the immediate project area. Dustfall may occur on surfaces within 200 to 800 ft. of the project site under low wind conditions. Blowing dust could be an annoyance in the vicinity of the site with winds exceeding 12 miles per hour. Construction dust is composed primarily of large particles that settle out of the atmosphere more rapidly with increasing distance from the source. Dust is more of a nuisance than a health hazard, except to sensitive receptors such as persons with respiratory diseases. The project sponsor would require the project contractor to wet down the construction site twice a day during construction to reduce particulates by at least 50%.

Diesel-powered construction equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of exceedances of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions. Although ambient concentrations of these pollutants would be increased for the duration of the construction period, no increases in measured concentrations at the 23rd Street monitoring station are expected to occur.

Because of the mitigation measure on p. 18 construction air quality impacts will not be discussed in the EIR.

Project Operation

Project and cumulative air quality impacts and local wind and shadow effects will be described in the project EIR.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
7. <u>Utilities and Public Services.</u> Would the proposed project have an effect upon, or result in a need for new or altered, governmental services in any of the following?					
fire protection	_____	_____	X	_____	X
police protection	_____	_____	X	_____	X
schools	_____	_____	X	_____	X
parks or other recreational facilities	_____	_____	X	_____	X
maintenance of public facilities	_____	_____	X	_____	X
power or natural gas	_____	_____	X	_____	X
communications systems	_____	_____	X	_____	X
water	_____	_____	X	_____	X
sewer/storm water drainage	_____	_____	X	_____	X
solid waste collection and disposal	_____	_____	X	_____	X

Fire Protection: Water supply and pressure in the vicinity are adequate to suppress fire. Minimum emergency response time from the three fire stations serving the site would be less than four minutes. No additional personnel or

equipment would be required due to project development./1/ The project would incorporate all emergency response systems stipulated by the Life Safety Code, including fire alarms, an emergency communication system, emergency power supply and emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.

Police Protection: The area is currently served by 24-hour patrol cars originating from Central Station; there is no foot beat. Response time to the site is 4 minutes for priority calls. The project is would not generate a need for additional police services./2/

Schools: The project would not affect area schools. San Francisco Public schools have experienced a reduction in enrollment over the past several years and could accomodate any increase in school-age children generated from an increase in population as a result of the project./3/

Parks: Project employees could increase the midday use of Portsmouth Square, one block west of the site; Redwood Park, one block northeast of the site and/or other open space in the Downtown area, but would not cause a need for additional personnel or maintenance.

Public facilities: The project would have no direct effect on the maintenance of public facilities.

Power or natural gas: Gas and electricity would be provided by Pacific Gas and Electric Company (PG&E). Depending upon demand of the project, it may be necessary for PG&E to install new connection facilities./4/ Project energy consumption will be discussed in the EIR.

Communications: Pacific Telephone would provide phone service to the project and anticipates no problem in meeting demand of the project. Conduit would have to be extended under Montgomery St. from south of Sacramento St. to connect to existing facilities./5/

Water: The proposed project would generate a demand for approximately 31,250 gallons of water per day. Existing 8-inch water mains on Montgomery, Sacramento, or Commercial Sts. would serve the project. The San Francisco Water Department would be able to meet project-generated demand./6/

Sanitary Sewer: The project would also generate about 31,250 gallons per day of dry-weather wastewater flows. Wastewater from the site would flow through 3-ft. by 5-ft. brick sewers under Montgomery, Sacramento or Commercial Sts. to the North Point Treatment Plant for primary treatment and later would be transported to the Southeast Plant for secondary treatment. San Francisco wastewater facilities have adequate capacity to serve this project./7/

Solid Waste Disposal: The project would generate an estimated 320 pounds of solid waste per day. Golden Gate Disposal Company serves the site and anticipates no problems in meeting collection demand./8/

All utilities and public services could serve the project with existing capacity; this topic will not be discussed in the project EIR.

NOTES - Utilities and Public Services

/1/ Edward J. Phipps, Assistant Chief, Support Services, San Francisco Fire Department, letter communication, October 22, 1982.

/2/ James P. Shannon, Deputy Chief of Police, Administrative Bureau, San Francisco Police Department, letter communication, November 19, 1982.

/3/ San Francisco Unified School District, Proposal for Leasing and Selling Vacant Property, April 29, 1980, pp. 28 and 29.

/4/ D. J. Cardner, Industrial Power Engineer, Pacific Gas & Electric Company, letter communication, November 12, 1982.

/5/ W. Ottens, Engineer, Pacific Telephone, letter communication, October 25, 1982.

/6/ Harlow Swain, Senior District Water Serviceman, San Francisco Water Department, letter communication, October 25, 1982.

/7/ Nathan Lee, San Francisco Clean Water Program, letter communication, October 27, 1982.

/8/ Peter Gardella, Vice President, Golden Gate Disposal Company, telephone communication, October 20, 1982.

8. Biology.

Yes Maybe No N/A Disc.

- a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?

_____ X _____ X

- | | <u>Yes</u> | <u>Maybe</u> | <u>No</u> | <u>N/A</u> | <u>Disc.</u> |
|---|------------|--------------|-----------|------------|--------------|
| b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site? | _____ | _____ | <u>X</u> | _____ | _____ |
| c. Would the project require removal of mature scenic trees? | _____ | _____ | <u>X</u> | _____ | _____ |

The site is completely covered with impervious surfaces. The project would not affect any plant or animal habitat. This topic will not be discussed in the project EIR.

- | | <u>Yes</u> | <u>Maybe</u> | <u>No</u> | <u>N/A</u> | <u>Disc.</u> |
|--|------------|--------------|-----------|------------|--------------|
| 9. <u>Land.</u> (topography, soils, geology) Would the proposed project result in or be subject to: | | | | | |
| a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site (slides, subsidence, erosion and liquefaction)? | _____ | _____ | <u>X</u> | _____ | <u>X</u> |
| b. Grading (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)? | <u>X</u> | _____ | _____ | _____ | <u>X</u> |
| c. Generation of substantial spoils during site preparation, grading, dredging or fill? | _____ | _____ | <u>X</u> | _____ | _____ |

The site is just west (on the shore side) of the 1852 shoreline as shown on U.S. Coast Survey maps. The site elevation is about 14 ft. above sea level at Montgomery St. and rises to about 20 ft. above sea level at the west property line of the full project site. Based on boring data for adjacent sites, subsurface conditions are expected to consist of a small amount of sandy fill overlying dense sand and stiff to hard clay. Settlement would not be expected to be a potential geologic hazard./1/

Groundshaking is expected to be "strong" on the site for a major earthquake of the 1906 type./1/ The project would be constructed under the supervision of structural and geotechnical engineers and would comply with all applicable seismic and life safety standards.

It has not been determined if pile driving for the building foundation would be necessary. A complete geotechnical study would be prepared for the project by a California-licensed engineer; the project sponsor would follow the recommendations of the study. This topic will not be discussed in the project EIR.

NOTE - Land

/1/ Dames and Moore, Preliminary Geotechnical Study, 505 Montgomery St. Project, November 1, 1982.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
10. <u>Water</u> . Would the proposed project result in:					
a. Reduction in the quality of surface water?	_____	_____	<u>X</u>	_____	<u>X</u>
b. Change in runoff or alteration to drainage patterns?	_____	_____	<u>X</u>	_____	<u>X</u>
c. Change in water use?	<u>X</u>	_____	_____	_____	<u>X</u>
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?	_____	<u>X</u>	_____	_____	<u>X</u>

All site runoff would drain into the City's combined sanitary and storm sewage system. Because the site is now covered with impervious surfaces, no change in the amount of runoff or in drainage patterns is expected. The project would increase water use on the site from 5,000 to approximately 31,250 gallons per day. The San Francisco Water Department would be able to meet this demand./1/ No water bodies, springs, or water courses are located on the site. If excavation were to extend below groundwater level, dewatering would probably be necessary; the quantity and rate of flow is expected to be minimal. A complete geotechnical report would be prepared by a California - licensed engineer during the design of the project, and would include information on groundwater levels and flows.

It has not been determined if dewatering would be necessary. If dewatering were necessary the project would include the mitigation measures on p. 19. This topic will not be discussed in the project EIR.

NOTE - Water

/1/ Harlow Swain, Senior District Water Serviceman, San Francisco Water Department, letter communication, October 25, 1982.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
11. <u>Energy/Natural Resources</u> . Would the proposed project result in:					
a. Any change in consumption of energy?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. Substantial increase in demand on existing energy sources?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u> </u>

Project construction and operation would increase energy consumption derived from non-renewable resources. Energy consumption will be discussed in the project EIR.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
12. <u>Hazards</u> . Would the proposed project result in:					
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
b. Creation of or exposure to a potential health hazard?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
c. Possible interference with an emergency response plan or emergency evacuation plan?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>

The project would increase the daytime population in downtown San Francisco. Employees in the proposed building would contribute to congestion if an emergency evacuation of the Downtown area were required. Because of the mitigation measure proposed as part of the project as noted on p. 19, this topic will not be discussed in the project EIR.

Yes Maybe No N/A Disc.

13. Cultural. Would the proposed project:

a. Include or affect an historic site, structure or building?

X _____ _____ _____ X

b. Include or affect a known archaeological resource or an area of archaeological resource potential?

_____ X _____

c. Cause a physical change affecting unique ethnic or cultural values?

_____ X _____

Because buildings presently occupy the site there is little chance that any historic or prehistoric artifacts would be found on the site during construction. Archaeology will not be discussed in the EIR because the project sponsor has proposed the mitigation measure on p. 19 regarding archeological resources.

The building located at 527 Montgomery St., on Lot 5 of Assessor's Block 227, has been rated "C", for contextual importance, (on a scale of "A" - highest to "D" - lowest) in an architectural survey conducted by the Foundation for San Francisco's Architectural Heritage. The building was not rated in a similar survey conducted by the Department of City Planning in 1976. There have been several alterations to the building since it was originally constructed. The building would be demolished as a result of the project. This topic will be discussed in the EIR.

C. MITIGATION MEASURES

Yes No Disc.

Are mitigation measures included in the project?

X _____ X

Are other mitigation measures available?

X _____

Mitigation measures currently proposed as part of the project are listed below. These measures, and possibly others, will be included in the EIR.

- The project sponsor would require the general contractor to wet down demolition and construction areas at least twice a day to reduce dust generation by approximately 50%.

- A detailed geotechnical report will be prepared by a California - lisened engineer for the project sponsor. The project sponsor and contractor would follow recommendations made in that report regarding project construction.
- Should dewatering be necessary, the level of the water table and potential settlement and subsidence would be monitored by the general contractor. The City could require a lateral and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during the dewatering. Control lines and benchmarks would be established for monitoring horizontal and vertical movement.
- If, in the judgement of City engineers, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt the settlement.
- If dewatering were necessary, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found necessary by the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.
- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building occupancy permits.
- Should evidence of historic or prehistoric artifacts be uncovered at the site during construction, the sponsor would agree: 1) to require the project contractor to notify the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board; 2) to require that the contractor suspend construction in the area of the discovery for a maximum of four weeks to permit review of the find and, if appropriate, retrieval of artifacts; 3) for an archaeologist or historian or other expert acceptable to the Environmental Review Officer to help the Office

of Environmental Review determine the significance of the find and identify feasible measures, if any, to preserve or recover artifacts; and 4) to implement archaeological mitigation measures which would be consistent with Assembly Bill 952.

- As recommended by the Environmental Protection Element of the San Francisco Comprehensive Plan, an analysis of noise reduction requirements would be prepared for the project sponsor and recommended noise insulation features would be included as part of the project.

D. ALTERNATIVES

<u>Yes</u>	<u>No</u>	<u>Disc.</u>
<u>X</u>	<u> </u>	<u>X</u>

Were other alternatives considered?

Several alternatives to the project are under consideration. These alternatives will be discussed in the project EIR.

Alternative 1, No Project: This alternative would retain the site in its present condition.

Alternative 2, New Construction on Total Project Site: This alternative would consist of a shorter, bulkier building, with approximately 348,700 gross sq. ft. of new development.

Alternative 3, Office Building Complying with GDD: This alternative would be an office building consistent with the controls recommended by Guiding Downtown Development, July 1982. The building would have a height of 200 feet and contain no on-site parking spaces. Gross floor area would be approximately 300,000 sq. ft. A sub-alternative would include residential use as part of the new building.

E. MANDATORY FINDINGS OF SIGNIFICANCE

<u>Yes</u>	<u>No</u>	<u>Disc.</u>
------------	-----------	--------------

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?

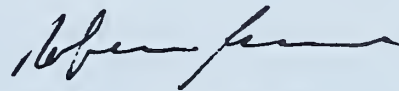
<u> </u>	<u>X</u>	<u> </u>
---------------	----------	---------------

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<u> </u>	<u> X </u>	<u> </u>
3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable?	<u> X </u>	<u> </u>	<u> X </u>
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	<u> </u>	<u> X </u>	<u> </u>
5. Is there a serious public controversy concerning the possible environmental effect of the project?	<u> </u>	<u> X </u>	<u> </u>

The project might contribute to the effects of cumulative development on housing demand, transportation systems, air quality, and energy demand. These items will be discussed in the project EIR.

On the basis of this initial evaluation:

- _____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.
- _____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers_____, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- ✓ _____ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Robert W. Passmore
Assistant Director-Implementation

for

Dean Macris
Director

Date: 1/4/83

APPENDIX B: ARCHITECTURAL RESOURCES**ARCHITECTURAL EVALUATION SURVEYS**

The architectural ratings discussed in the text of this report (see Section III.B. Environmental Setting, pp. 29-32 and Figure 11, pp. 30) represent the results of two separate architectural surveys.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, the results of which were entered in an unpublished 60-volume record of the inventory. The rated buildings are also represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The inventory and maps are on file at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was given two numerical ratings, for architectural quality and for overall architectural significance, urban design context, and environmental significance. The latter rating is referred to in this report. The ratings ranged from a low of "0" to a high of "5". The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best 2% of the City's architecture. A full description of the survey rating system is available at the Department of City Planning, 450 McAllister St.

HERITAGE SURVEY

The Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the original inventory results were published in the book Splendid Survivors (Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, San Francisco, 1979). A subsequent 1982 Heritage survey evaluated all structures in the C-3 zoning districts in areas not covered in the Splendid Survivors survey ("San Francisco Downtown Architectural Survey: C-3 Zoning District, Final Evaluated List", December 1, 1982). The expanded inventory has not been formally published by Heritage. Criteria considered in rating the buildings for both surveys include Architectural Significance, Historic Context and Negative Alterations. Summary ratings from "A" to "D" were assigned to each building on the basis of these scores. The summary ratings, as described on pp. 12-13 of Splendid Survivors, are listed below:

- A. "Highest Importance. Individually the most important buildings in downtown San Francisco, distinguished by outstanding qualities of architecture, historical values, and relationship to the environment.

All A-group buildings are eligible for the National Register, and of highest priority for City Landmark status."

- B. "Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. These buildings tend to stand out for their overall quality rather than for any particular outstanding characteristics. B-group buildings are eligible for the National Register, and of secondary priority for City Landmark status."

The Landmarks Preservation Advisory Board does not distinguish between "A" rated and "B" rated buildings for purposes of preservation.

- C. "Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. They provide the setting for more important buildings and they add visual richness and character to the downtown area. Many C-group buildings may be eligible for the National Register as part of historic districts."
- D. "Minor or No Importance. Buildings which are insignificant examples of architecture by virtue of original design, or more frequently, insensitive remodeling. This category includes vacant buildings and parking lots. Most D-group buildings are sites of opportunity."

Not Rated. Buildings which have been built or suffered insensitive exterior remodelings since 1945.

ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

The City Planning Commission adopted by Resolution No. 8600 (May 29, 1980), a "List of Architecturally and/or Historically Significant Buildings in The Downtown," based on the above described surveys. Generally, buildings rated "3" or higher in the DCP survey or "A" or "B" in the original Heritage survey (Splendid Survivors) were placed on the list. The expanded Heritage survey (1982) has not been adopted by the City Planning Commission to date.

The purpose of the list is to advise developers and building owners of the importance the City places upon the buildings' conservation and to require special review by the Commission of any plans which would affect any building or buildings on the list. Resolution No. 9240 (November 19, 1981) reaffirms the Commission's concern for preservation of architecturally significant buildings and acknowledges the Director's intent to recommend denial of projects that propose to demolish significant buildings. As noted in Section III.B., no buildings on the project site are included on this list.

APPENDIX C: EMPLOYMENT AND HOUSING FACTORS

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982, IN GROSS SQUARE FEET

<u>Year</u>	<u>Total Gross Sq. Ft. Completed</u>	<u>5-Year Total (Net)/a/</u>	<u>5-Year Annual Average (Net)/a/</u>	<u>Cumulative Total of All Office Buildings</u>	<u>Cumulative Total of All Downtown Office Buildings</u>
Pre-1960				28,145,000/b/	24,175,000/c/
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
1982	3,771,000				
		8,084,000/d/	2,694,700/d/		
1980-1982		(7,275,600)/d/	(2,425,200)/d/	60,635,600	56,559,600

(Continued)

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1982,
IN GROSS SQUARE FEET (Continued)

/a/ Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.

/b/ Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.

/c/ Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin St. is included.

/d/ Three-year total and average.

SOURCE: Department of City Planning, March 15, 1983.

● APPENDIX C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO

Process Used to Develop the Cumulative List of Office Projects In Downtown San Francisco:

The attached list of office and retail projects was prepared as a background document for a land use-based method of analyzing cumulative impacts. A land use-based cumulative analysis is one of the two methods of cumulative analyses suggested by the State CEQA Guidelines (Section 15130(b)(1)(A)), whereby a list of related projects is used to determine the combined effects of the whole and to determine the contribution of a proposed office or retail project to the overall cumulative effect. This is only one method of determining cumulative impacts. The other method of determining cumulative impacts is an analysis based on estimates of total employment projected for the area. This latter method is permitted by State Guidelines Section 15130(b)(1)(B) if the employment projections are based on an appropriate planning document.

The attached cumulative list is an expanded version of past lists and includes all office and large retail projects proposed, approved, under construction and recently completed in the greater downtown area which have active applications in the Department of City Planning. This list is appropriate for use only in a land-use based analyses of the cumulative impacts of office/retail projects in the greater downtown.

Relevant Redevelopment Agency projects have been included in the list. The Rincon Point/South Beach Redevelopment Area includes four projects: 77,000 sq. ft. of office space at 181 Steuart Street, 200,000 sq. ft. of office space on First Street, and a 30,000-sq.-ft. office building, all in at least preliminary negotiation stages between the Agency and potential developers; and 453,000 sq. ft. of office space proposed by the U.S. Postal Service at the Rincon Annex site (Source: San Francisco Redevelopment Agency). The listing for the Yerba Buena Gardens in the YBC Redevelopment Area includes 1.2 million sq. ft. of office space in the Olympia and York proposal (Source: San Francisco Redevelopment Agency). Other office buildings in the YBC and applicable parts of the Western Addition Redevelopment Areas are listed under individual building names or addresses, based on information obtained from regular contact with redevelopment agency staff. Other jurisdictions are also contacted when the cumulative list is updated: the new 293,000-sq.-ft. State Office Building under construction at Van Ness and McAllister is included; no Federal office space is proposed in downtown San Francisco in the near future other than that at the Rincon Annex Post Office site in the Rincon Point Redevelopment Area, (Source: John Scales, General Services Administration, telephone conversation, April 11, 1984).

Hotel projects have not been included in the list because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit and therefore also do not contribute to effects such as maximum production of air pollutants (see 135 Main Final Supplemental EIR, EE81.61, certified November 30, 1982, p. 150). Residential projects have not been included because residential uses

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are extremely limited in the study area and generally are unrelated to office uses. Residential travel in the downtown usually takes place in the contra-commute direction during peak hours and thus does not contribute to cumulative traffic or transit congestion. In addition, office trips in the p.m. peak period are assumed to be made by workers traveling to their residences. Trip generation calculated for residential uses includes persons returning to their homes after work in the p.m. peak. Inclusion in the cumulative analysis of residential uses in downtown San Francisco would double count project-generated travel: once when employees left their office building and again when they arrived at their residence if they lived in the downtown area.

Approximately 1.3 million sq. ft. of office space is proposed for locations outside the greater downtown area. All but two of these projects (San Francisco Executive Park just east of U.S. 101 near the southern border of San Francisco, proposed for about 1.1 million sq. ft., and St. Mary's Medical Office Building on Shrader at Fulton, proposed to be about 90,000 sq. ft.) are under 10,000 sq. ft. These projects are not included on the cumulative list because their impacts do not accumulate measurably with office space in the downtown area. Although the Executive Park proposal would contribute to the auto traffic on U.S. 101, the critical analysis points for p.m. peak-period cumulative downtown traffic on U.S. 101 are the freeway entrances near downtown, the approaches to the Bay Bridge, and the Alemany interchange which restricts southbound U.S. 101 traffic on the p.m. peak period. Executive Park traffic would not contribute measurably to peak demands on freeway entrances near downtown or peak direction at peak period impacts on the Alemany interchange and is factored in as part of the traffic approaching the Bay Bridge before cumulative downtown development is added. (Executive Park Subsequent DEIR, EE81.197E, September 9, 1983. Note that an EIR was prepared in 1976 for a project on this site; following permits for four of the proposed office buildings, the developer made major changes in the project that necessitated a new EIR which is now in progress.)

The Department's Master Project Log contains listings for projects which are no longer active for various reasons, such as no action by project sponsor in over one year, application withdrawn by sponsor, or project proposal revised to non-office or non-retail uses (examples of these projects include 272 Sutter, approximately 65,000 sq. ft., withdrawn by sponsor; 2nd and Harrison, 49,000 sq. ft., application revised from office space to parking lot). Some of these files have not been formally closed due to other higher staff priorities; however, the projects are not included on the cumulative list when staff assigned have concluded that the office project has been abandoned or withdrawn or the scope or nature of the proposal is so uncertain as to be not reasonably foreseeable.

● TABLE C-1a: PROJECTS COMPLETED BEFORE 1984

Assessor's Block	Case No.	Project Name	Office		Retail		Date Occu- pied
			(Gross Sq. Ft.)		(Gross Sq. Ft.)		
			Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.	
Completed But Not In Base Case Analysis							
106	81.415ED	1299 Sansome	41,000	41,000	3,500	3,500	1983
141	81.151EV	100 Broadway	13,000	13,000			1983
163	EE81.1	901 Montgomery	63,000	63,000	18,800	18,800	1983
164	81.631D	847 Sansome	23,750	23,750			1983
164	81.251D	936 Montgomery	21,500	11,500			1983
196		736 Montgomery	40,000	40,000			1983
196	CU79.49	Pacific Lumber Co.	92,000	92,000			1983
206	81.165D	401 Washington/Battery	13,200	13,200	1,800	1,800	1983
228	81.610ED	569 Sacramento (C)	19,000	19,000			1983
237	DR80.6	353 Sacramento (Daon)	277,000	251,000	8,300	-2,000	1983
240	DR80.16	550 Kearny (Addition)	71,400	71,400			1983
263	CU79.12	101 California	1,265,000	1,257,000	24,700	-14,300	1983
287	81.550D	Sloane Building (C)	125,300	125,300	30,000	30,000	1983
292	DR79.13	Crocker National Bank	676,000	495,000	86,000	54,000	1983
312	EE79.370	50 Grant	90,000	90,000			1983
313	EE77.257	Nieman Marcus			143,000	128,000	1982
351	DR79.133	10 U.N. Plaza	92,050	92,050			1983
738	SFRA	One Flynn Center	25,000	25,000			1983
762	SFRA	Opera Plaza (M)	50,000	50,000			1983
3518	81.483V	291 10th St.	25,700	25,700		-25,700	1983
3702	EE81.25	1155 Market/8th	138,700	138,700	8,800	8,800	1983
3708	DR80.34	25 Jessie/Ecker Square	111,000	111,000			1983
3709	DR80.36	Five Fremont Center	791,200	722,200	35,000	17,300	1983
3712	DR79.11	Federal Reserve	640,000	640,000			1983
3717	EE78.413	150 Spear	330,000	330,000			1983
3718	DR79.12	Pacific Gateway	540,000	540,000	7,500	7,500	1983
3724	SFRA	Yerba Buena West	335,000	335,000			1983
3732	81.548DE	466 Clementina (C)	15,150	15,150			1983
3735	SFRA	Convention Plaza	339,000	339,000			1983
3735	SFRA	Planter's Hotel (C)	20,000	20,000			1983
3752	EE77-220	Office Bldg. (YBC SB-1)	11,000	11,000			1983
3763	81.287V	490 2nd at Bryant (C)	40,000	40,000			1983
3763	81.381	480 2nd at Stillman (C)	35,000	35,000			1983
3763	32.38EVD	400 2nd & Harrison	71,500	49,500			1983
3776	81.693EV	539 Bryant/Zoe	63,000	63,000			1983
TOTAL			6,504,450	6,188,450	367,400	227,700	

* (C) - Conversion (generally industrial and/or warehouse to office)

(M) - Mixed Use (office/residential/commercial)

SOURCE: Department of City Planning.

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In EIRs prepared during the latter half of 1983, the list used for cumulative analyses included a section labeled 'Completed But Not in Base Case.' As of the end of 1983, that list totaled over 6 million sq. ft. of office space and about 225,000 sq. ft. of retail space (see Table C-1a, Projects Completed Before 1984, p. A-4 of this document). These projects were included on earlier lists even though they were built and fully or partially occupied because some of the baseline data (measurements of the existing situation) for some transportation systems was collected in about mid-1982 and thus could not include the effects of these projects. The baseline has recently been updated to reflect 1984 for use in the Downtown Plan Draft EIR. Projects completed before 1984 are included in this updated baseline data. Using 1984 as the existing baseline situation means that projects completed by the end of 1983 should be omitted from the list of projects used for cumulative analysis in order to avoid counting effects of the projects twice. Because some of the baseline data previously used was collected more recently than mid-1982, list-based cumulative analyses overestimated some reported impacts by measuring the effects of office buildings as part of the baseline existing situation and by including the same office building in the calculations of future cumulative impacts. For example, PG&E is already serving office buildings completed in 1982 and 1983; including those buildings in calculations of future cumulative energy demand would count them twice. Therefore, for some part of the cumulative analyses, omitting projects completed by 1983 will provide more realistic predictions of future conditions.

The Department is aware of a proposal for the Southern Pacific property near China Basin, called 'Mission Bay.' The application for environmental review for that project has been withdrawn; no other applications have been filed. The project is too speculative to analyze; intensity, density and types of uses have not yet been determined by the developer. Parts of the developer's original proposal would require major rezoning and amendment of the City's Comprehensive Plan. Further, two San Francisco Supervisors have proposed that the City acquire the property, and one neighborhood has prepared a development plan quite different from that withdrawn by the developer. Without more settled decisions about this property, it is not reasonably foreseeable, to include it in the cumulative list analysis.

The Department of City Planning is in the process of preparing plans and environmental analyses for several areas in or near the downtown. Because these plans involve only proposals for zoning and other land use controls, they are not properly part of any cumulative list. Although analyses for these plans sometimes predict amounts of office space that could be built in the area being studied, the predictions are for purposes of assessing impacts of the plans and in no way reflect proposed future development.

Use of the Department's list for estimating cumulative impacts builds in certain limitations. It assumes, for example, that all proposals will be built at essentially the size proposed and that all buildings once built will be fully occupied. It is important to note that the cumulative list has not been adjusted to reflect temporary limitations on growth impacts by the City's actions to establish a Special Use District in the South of Market and a moratorium on new office and hotel space over 50,000 sq. ft. Nor has any adjustment been made to account for reduced building potential as proposed in the Downtown Plan (base FAR of 14:1 reduced to 10:1). Thus, the total square footages on the list of projects under formal review may be overestimated, and impacts based on the square footages may also be overestimated, if some buildings are not built, not fully occupied, or reduced in size.

● TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF
MARCH 10, 1984

Block	Case No.	Project Name	Office		Retail	
			(Gross Sq. Ft.)		(Gross Sq. Ft.)	
			Total	Net	Total	Net
			New Constr.	New Constr.	New Constr.	New Constr.
Downtown Office Projects Under Formal Review						
59	83.177E	1620 Montgomery	82,270	45,390		
110	82.129E	1000 Front	139,000	139,000	3,000	3,000
112	83.447E	1100 Sansome	55,000	48,000		
113	8264603	220 Green	3,520	3,520		
113	82.418E	1171 Sansome	30,000	30,000		
130	83.612C	1558 Powell	2,500	2,500		
136	83.476V	962 Battery	15,000	15,000		
192	83.412ED	1055 Stockton			81,500	66,500
194	83.128E	732 Washington	17,500	17,500	11,240	11,240
195	82.643E	660 Washington	3,938	3,938		
227	82.463E	505 Montgomery	327,300	300,670	12,100	-4,775
228	83.422E	560 Sacramento	48,000	31,000		
229	83.222EC	Embarcadero West	575,000	382,000	9,000	9,000
236	82.511E	222 Front	40,250	33,400	3,250	-0-
258	82.421E	Pine/Kearny	186,000	186,000	6,750	6,750
266	83.420ED	98 Battery	169,000	106,500		
267	83.421ED	225 Pine	134,000	134,000		
287	83.91ED	237 Kearny/Bush	99,600	87,800	6,100	2,400
288	83.148E	665 Bush (M)	12,400	2,600		-2,700
309	83.333E	212 Stockton	32,220	15,885	21,700	16,200
326	8312187	156 Ellis	3,200	3,200		
327	82.445E	Stockton/O'Farrell	43,300	25,750	57,950	28,000
331	81.448E	Mixed Use Development	50,000	50,000	70,000	49,000
336	83.21ECV	440 Turk	25,000	8,150		
642	83.218V	1699 Van Ness	20,000	20,000		
814	81.540E	101 Hayes	132,000	132,000	6,000	6,000
3526	83.475V	530-550 9th	42,300	42,300		
3702	83.196E	1169 Market, Trinity	820,000	805,000	40,000	40,000
3704	83.404	901 Market Penney's	145,500	126,000	80,000	80,000
3705	83.314E	5th and Market	880,000	778,000	120,000	40,000
3707	SFRA	YBC Office Bldg.	593,000	593,000		
3708	81.297ED	562 Mission	405,000	265,000	10,000	10,000
3708	83.75E	49 Stevenson	169,600	136,900	9,800	-2,900
3721	83.331E	100 First @ Mission	348,920	342,000		
3721	83.40EZD	524 Howard	279,000	279,000	15,000	15,000
3735	83.313E	35 Hawthorne	47,400	47,400	2,900	2,900
3736	83.311E	299 2nd @ Folsom	206,000	171,000	10,000	10,000
3744	84.41E	Hills Bros.	635,000	535,000	40,000	40,000

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● TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office		Retail	
			(Gross Sq. Ft.)		(Gross Sq. Ft.)	
			Total	Net	Total	Net
			New	New	New	New
			Constr.	Constr.	Constr.	Constr.
<u>Downtown Office Projects Under Formal Review</u>						
3749	83.464EV	50 Guy Place	17,500	17,500		
3752	83.310E	837 Folsom	200,000	200,000		
3769	83.213EV	59 Harrison	113,500	49,750		
3776	83.451E	501 Bryant	67,000	35,000	14,000	4,000
3778	83.547E	775 Bryant	27,890	27,890	3,675	3,675
3786	82.33E	655 5th/Townsend	126,250	126,250		
3786	83.272EV	525 Brannan	13,500	13,500		
3788	82.352EV	640 2nd	39,100	37,400		
3789	82.31EV	615 2nd/Brannan (C)	90,000	70,000	9,300	9,300
3794	83.545V	139 Townsend	51,200	50,000		
3923	81.491EVF	1550 Bryant	80,600	49,600		
-	SFRA	Yerba Buena Gardens	1,340,000	1,340,000		
-	SFRA	Rincon Point/S. Beach	760,000	760,000		
TOTAL UNDER FORMAL REVIEW			9,744,260	8,721,295	643,265	442,590

Major Downtown Office Projects; Approved, Not Yet Under Construction

65	82.168V	990 Columbus	12,000	12,000		
112	81.258	Ice House (C)	209,000	209,000		
164	81.583D	50 Osgood Place	22,500	22,500	9,100	9,100
176	83.229E	801 Montgomery	31,800	31,800	6,200	6,200
176	82.368E	900 Kearny	25,000	25,000	5,000	5,000
225	81.403ED	814 Stockton	3,500	3,500	3,300	3,300
265	81.195ED	388 Market at Pine (M)	234,500	85,500	10,000	-8,500
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000
271	83.13E	582 Bush	18,100	18,100	800	800
288	81.687ED	222 Kearny/Sutter	150,000	49,950	10,000	-8,400
294	82.87D	44 Campton Place	7,600	7,600		
642	82.224VEC	1750 California	82,525	82,525		
669	81.667ED	1361 Bush	13,000	13,000		
671	82.24V	1581 Bush (C)	16,000	16,000		
690	SFRA	Post/Van Ness	88,000	88,000		
716	81.581ED	Polk/O'Farrell (M)	61,600	61,600	22,400	22,400
818	83.94EV	583-591 Hayes (C)	4,900	4,900		
3504	82.137V	44 Gough (C)	30,000	30,000		

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● TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office		Retail	
			(Gross Sq. Ft.)		(Gross Sq. Ft.)	
			Total	Net	Total	Net
			New	New	New	New
			Constr.	Constr.	Constr.	Constr.
Major Downtown Office Projects; Approved, Not Yet Under Construction						
3702	81.549ED	1145 Market	137,500	108,500	8,000	8,000
3705	80.315	Apparel Mart III	332,400	332,400		
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350
3707	81.245DA	New Montgomery Pl.	227,500	209,700	2,200	-3,900
3708	81.493ED	71 Stevenson	324,600	324,600	6,200	6,200
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400
3717	81.183E	123 Mission	342,800	342,800		
3724	81.102E	Holland Ct. (C)	27,850	27,850		
3729	82.86D	774 Tehama	5,800	5,800		
3733	EE81.2	868 Folsom	65,000	65,000		
3733	82.29E	832 Folsom	50,000	50,000		
3735	SFRA	75 Hawthorne (C)	61,900	61,900		
3738	DR80.5	315 Howard	294,000	294,000	3,200	3,200
3749	EE81.18	Marathon - 2nd & Folsom	686,700	686,700	35,300	35,300
3750	82.241E	600 Harrison	228,000	228,000	10,000	10,000
3750	82.77V	642 Harrison (C)	54,400	45,900		
3764	82.591E	Second St. Sq. (C)*	333,000	263,000	25,000	25,000
3775	81.147V	338-340 Brannan (C)	36,000	36,000		
3776	EE81.59	Welsh Commons (M)	55,600	55,600	12,000	12,000
3788	81.296Z	690 2nd/Townsend (C)	16,600	16,600	16,000	16,000
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000		
3794	81.569EV	123 Townsend	104,000	49,500		
3794		155 Towsend	19,000	19,000		
3803	81.244D	China Basin Expansion	196,000	196,000		
9900	81.63E	Ferry Building Rehab.	309,500	97,500	163,500	124,000
TOTAL APPROVED			5,658,275	4,760,625	376,950	294,450

Major Downtown Office Projects Under Construction

58	82.234E	Roundhouse (C)	45,000	45,000	3,000	3,000
136	81.243E	955 Front/55 Green	50,000	50,000		
143	81.353ED	1000 Montgomery (C)	39,000	39,000		
146	83.99EC	644 Broadway	42,800	42,800		
161	DR80.191	Mirawa Center	36,000	36,000	30,650	30,650
166	DR80.15	750 Battery	105,400	105,400	12,800	12,800
166	CU81.7	222 Pacific at Front (C)	142,000	142,000		

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● TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF MARCH 10, 1984 (continued)

Block	Case No.	Project Name	Office		Retail	
			(Gross Sq. Ft.)		(Gross Sq. Ft.)	
			Total	Net	Total	Net
			New	New	New	New
			Constr.	Constr.	Constr.	Constr.
Major Downtown Office Projects Under Construction						
167	SFRA	Golden Gateway III	103,000	103,000		
176	81.673EACV	Columbus/Pacific (Savoy)	49,000	49,000	22,000	22,000
208	81.104EDC	Washington/Montg. (M)	235,000	233,300	4,000	-1,200
227	EE80.296	Bank of Canton	230,500	177,500		-800
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500
261	81.249ECQ	345 California (M)	640,000	466,500	15,500	15,500
262	81.206D	130 Battery	41,000	41,000		
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200
271	81.517	453 Grant	27,500	27,500	6,200	6,200
288	81.461EC	333 Bush (Campeau) (M)	498,400	458,100	20,900	20,900
288	DR80.24	101 Montgomery	264,000	234,000	4,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
311	82.120D	S.F. Federal	246,800	218,850	1,600	-9,440
351	DR79.24	Mardikian/1170 Market	40,000	40,000		
641	82.200CV	1735 Franklin (C)	8,600	8,600		
672	SFRA	Wealth Investments	104,500	104,500		
743	SFRA	Van Ness/Turk (Vanguard)	85,000	85,000		
767	STATE	State Office Building	293,300	293,300		
816	82.212ED	300-350 Gough (M/C)	16,000	16,000		
834	82.603E	25 Van Ness (C)	101,800	42,800	36,400	36,400
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000
3715	82.16EC	121 Steuart	33,200	33,200		
3715		141 Steuart	80,000	80,000		
3717	EE79.236	101 Mission	219,350	219,350		
3717	EE80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3722	81.417ED	144 Second at Minna	30,000	30,000		
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200
3787	81.306	252 Townsend at Lusk	61,000	61,000		
TOTAL UNDER CONSTRUCTION			5,985,900	5,530,950	226,300	184,660
GRAND TOTAL (ALL PROJECTS)			21,388,430	19,012,870	1,246,515	921,700

* (C) - Conversion (generally industrial and/or warehouse to office)

(M) - Mixed Use (office/residential/commercial)

SOURCE: Department of City Planning

● TABLE C-3 (Revised): PROJECT EFFECTS ON REGIONAL HOUSING MARKETS

	<u>Project Demand in 1985</u> <u>Number of Households*</u>
San Francisco /a/	130 to 270
Peninsula /b/ (San Mateo and Santa Clara Cos.)	170
East Bay /b/ (Alameda and Contra Costa Cos.)	280
North Bay /b/ (Marin and Sonoma Cos.)	110
TOTAL	690 to 830

/a/ Range of San Francisco employees and households based on 101 Montgomery Street Final EIR, EE80.26, certified May 7, 1981 (15-30% of all employees would reside in San Francisco and 1.4 workers would occupy each household) and "Office Housing Production Program (OHPP) Interim Guidelines," Department of City Planning, January 22, 1982 (40% of all employees would reside in San Francisco and 1.8 workers would occupy each household).

/b/ Distribution of employees based on weighted average of expected employees in Federal Reserve Bank (EE78.207), 101 California Street (EE78.27), Pacific Gateway, (EE78.61), and Crocker National Bank (EE78.298), from 456 Montgomery Street Final EIR (EE78.178), p. 167. Workers per household in non-San Francisco Counties is assumed to be 1.3 based on 1980 Census data; distributions are: Peninsula, 18%, East Bay, 30%, and North Bay, 12%.

* Rounded to the nearest ten.

SOURCE: Environmental Science Associates, Inc.

TABLE C-4: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME

<u>Gross Annual Income Per Household or Per Individual</u>	<u>Maximum Affordable Monthly Housing Expenditure*</u>	<u>Housing Cost and Type of Unit</u>		<u>Source</u>
		<u>Monthly Cost**</u>	<u>Type of Unit (Price)</u>	
\$5,000	\$125			
8,300 /a/	208			
10,000	250			
10,680	267	\$267 -	Census Median Rent	/e1/
11,560	289	289 -	Median Rent, Studio Apartments	/f1/
15,000	375			
18,200	455	455 -	Median Rent, All Units	/f2/
20,000	500			
23,520	588	588 -	Median Rent, 3+ Bedroom Units	/f3/
25,000 /b/	625			
27,300 /c/	683			
30,000 /b/	750			
35,000	875			
40,000	1,000			
40,880	1,022	1,022 -	Lowest House Price (\$95,000)	/g1/
45,000	1,125	1,125 -	Census Median Value (104,600)	/e2/
50,000	1,250			
52,560	1,314			
55,000	1,375			
65,080	1,627	1,627 -	Median House Price (151,203)	/g2/
101,880	2,547	2,547 -	Highest House Price (236,750)	/g3/
300,000 /d/	7,500			

(Continued)

TABLE C-4: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME (Continued)

* The Office Housing Production Program (OHPP) Interim Guidelines, January, 1982, define affordable housing as follows:

Rental expenses not exceeding 30% of gross monthly income, adjusted for family size; and home ownership expenses not exceeding 38% of gross monthly income, adjusted for family size, including mortgage payments, property taxes, insurance, and/or homeownership association dues.

For the purpose of this table, 30% of gross monthly income is used to calculate housing affordability for both renters and owners. For owners it is assumed that 8% of gross monthly income would cover property taxes, insurance, and/or homeownership association dues and other related expenses. No adjustment has been made for family size because family circumstances vary widely.

** Monthly housing costs refer to rents and mortgage payments for the housing prices shown in parentheses; sources of rents and house prices are as footnoted. Monthly costs of ownership housing were calculated as monthly mortgage expenses assuming 20% down payment, 30-year mortgage, and 16% interest rate, not including insurance, property taxes, and other related housing costs.

/a/ U.S. Bureau of Labor Statistics, March, 1982, "Area wage survey for the San Francisco-Oakland, California Metropolitan Area." \$9,600 was the mean 1980 income of inexperienced file clerks, one of the lowest-paid office occupations listed.

/b/ The range of \$25,000 to \$30,000 is assumed to approximate the median annual income of project employees (see Bank of Canton Final EIR, EE80.296, certified July 15, 1982, for discussion of incomes).

/c/ The \$27,300 income figure was derived by inflating the \$16,300 median income of downtown office workers from the 1974 SPUR survey through December, 1981 by 67% using U.S. Bureau of Labor Statistics national wage information for nonsupervisory finance, insurance, and real estate sector employees since 1974.

/d/ Montgomery-Washington Building FEIR, 81.104E, certified January 28, 1982. The median salary of wage earners at 601 Montgomery St. was estimated to be \$52,560 and the highest salary for corporate officers \$300,000, according to a 1981 survey.

/e/ City Planning and Information Services, "1980 Census Information," March 1982: 1. median rent 2. median noncondominium housing value. Rental data include residential hotels whose rent levels may be substantially lower than those of other types of rental dwellings and may therefore have an effect on the median rent.

(Continued)

TABLE C-4: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME (Continued)

/f/ Department of City Planning, "Rent Survey," 1980. Median rents are for:
1. studio apartments 2. all units 3. 3+ bedrooms.

These data are based on a small nonrandom sample of newspaper ads and may not reflect true rental costs.

/g/ San Francisco Board of Realtors, "Multiple Sales Service," October 5, 1981. (Annual data on housing sales prices include all homes listed by the Board of Realtors that were sold from February 11, 1981 to October 1, 1981 in San Francisco):

1. lowest price 2. median price 3. highest price

SOURCE: Environmental Science Associates, Inc.

TABLE C-5: SUMMARY OF RECENT STUDIES ON FISCAL IMPACTS OF DOWNTOWN DEVELOPMENT

STUDY, AUTHOR, DATE	PURPOSE OF STUDY	DATA SOURCES	STUDY METHODOLOGY	CONCLUSIONS
"Fiscal Concerns" in Downtown San Francisco Conservation and Development Planning Program, Phase I Study, Sedway/Cooke, et al., October 1979, pp. 56-59	To qualitatively assess the likely fiscal impact of new development in the C-3 area under Proposition O.	SPUR STUDY (1975)	SPUR cost/revenue estimates for downtown in 1973 and for projected growth 1974-1990 were assumed. Proposition 13's effect on revenues and the possible need for increased transportation infrastructure were considered. Generalized conclusions about fiscal impact of new development were drawn.	1) After Proposition 13, "costs may exceed revenues in the downtown by as much as 25%." 2) "[N]ew downtown development will not solve the city's growing fiscal problem; without new revenue sources, development will make it worse in the long run."
Downtown Highrise District Cost Revenue Study, Arthur Andersen & Co., November 1980	To quantify for 1976-77 (pre-Prop. 13) and 1978-79 (post-Prop. 13) how much revenue the C-3-0 area generated and how much it costs to provide city services to the area.	Data compiled from city records and through conversations with city officials.	Only revenues generated within the C-3-0 and costs of providing services to the C-3-0 counted. "The principle guiding the study methodology was to calculate the amount of revenue that San Francisco would lose and the costs that could be reduced if the Downtown Highrise District were a separate city."	The C-3-0 generated \$56.79 million in 1976-77, or 61% more than the cost of city services to the area. In 1978-79, revenues were \$53.29 million, or 48% greater than costs.
"Fiscal Considerations" Appendix C, 101 Montgomery Street FEIR, Reicht Hausrath & Associates, January 1981.	Generalize conclusions about how post-Proposition 13 development downtown is likely to change the City's fiscal health from what it would be without new development.	SPUR Study, city records and conversations with city officials.	Under alternative assumptions about the cost/revenue balance in existing buildings and in new buildings, the fiscal impact over time of new development was compared to that of no new development.	"[A]n on-going process of new development would improve the City's fiscal situation. This beneficial impact would cease if new development were halted. This conclusion is tentative due to uncertainties about increased Muni costs."
Downtown Highrise District Cost/Revenue Study, David Jones, February 1981.	To quantify for 1978-79 the revenues generated by businesses in the C-3-0 and the service costs imposed on the city and BART by the C-3-0.	Arthur Andersen study.	The Jones study differs from the Andersen study primarily as follows: 1) Costs of BART (but not revenues to BART) are included; 2) Only revenues paid by businesses and building owners are considered; 3) Muni deficit is computed differently; 4) Most costs estimated as percentage of revenues rather than actual service demand in the C-3-0.	The C-3-0 imposed costs of \$94.4 million on San Francisco and BART, or 125% more than the revenues the area's businesses and building owners generated to San Francisco.
Fiscal Impacts of New Downtown High-Rises on the City and County of San Francisco, Gruen Gruen + Associates, March 1981	To quantitatively estimate City revenues from the C-3-0 and costs of serving the C-3-0 in 1998, assuming the addition of 30 million square feet of building space in the C-3-0 between 1981 and 1998.	Arthur Andersen study; data compiled from city records and through conversations with City officials.	"Only direct effects are considered." Costs are only measured for services "provided within the physical limits of the C-3-0 district" and revenues are limited to "taxes on buildings within the district and the activities that take place within those buildings." Assumes the Arthur Andersen study is accurate and builds upon it.	In 1980, revenues from the 39 million square feet of building space in C-3-0 were 1.66 times as large as costs. In 1998, after completion of the 30 million square feet of new space, revenues from the entire 69 million sq. ft. of C-3-0 building space would increase to 1.92 times as large as costs.

SOURCE: Reicht, Hausrath and Associates

APPENDIX D: TRANSPORTATION, CIRCULATION, AND PARKING

● TABLE D-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

<u>Level of Service</u>	<u>Description</u>	<u>Passengers per Seat</u>
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with less than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur which can rapidly cause operations to deteriorate.	1.26-1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability is extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51-1.60

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

● PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in Urban Space for Pedestrians (MIT Press, 1975).

Table D-2 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure D-2, p. A-51 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE D-2: PEDESTRIAN FLOW REGIMEN

<u>FLOW REGIME/a/</u>	<u>CHOICE</u>	<u>CONFLICTS</u>	<u>FLOW RATE (p/f/m)/b/</u>
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
<u>Design Limit - Upper Limit of Desirable Flow</u>			
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure D-2, p. A-51.

/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.

/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

● INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table D-3). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

TABLE D-3: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

● TABLE D-4: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

<u>Level of Service</u>	<u>Description</u>	<u>Volume/Capacity (v/c) Ratio*</u>
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.60
B	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61-0.70
C	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the high volumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71-0.80
D	Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds (typically about 30 to 35 mph) than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00+

* Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from information in the Highway Capacity Manual, Special Report 87, Highway Research Board, 1965.

● TABLE D-5: OUTBOUND REGIONAL TRANSIT DEMAND AND LEVEL OF SERVICE

Transit Agency	1984		2000 w/o Cumulative Development /a/,/d/		2000 with Cumulative Development /a/	
	<u>P/S/b/</u>	<u>LOS/c/</u>	<u>P/S</u>	<u>LOS</u>	<u>P/S</u>	<u>LOS</u>
<u>P.M. Peak Hour</u>						
Muni						
Northeast	1.16	D	0.85	C	1.05	D
Northwest	1.26	E	1.01	D	1.25	D
Southwest	1.45	E	1.15	D	1.42	E
Southeast	1.06	D	0.73	B	1.01	D
BART						
Transbay	1.53	F	0.82	C	1.42	E
Westbay	1.10	D	0.81	C	1.06	D
AC Transit	0.94	C	0.94	C	1.06	D
GGT Bus	1.00	C	0.57	B	0.91	C
GGT Ferry	0.57	B	0.20	A	0.38	A
Tiburon Ferry	0.40	A	0.40	A	0.60	B
SamTrans	1.12	D	0.73	B	1.19	D
CalTrain (SPRR)	0.61	B	0.50	A	0.79	C
<u>P.M. Peak Period</u>						
Muni						
Northeast	1.06	D	0.77	C	0.95	C
Northwest	1.13	D	0.90	C	1.05	D
Southwest	1.31	E	1.04	D	1.29	E
Southeast	1.00	C	0.66	B	0.88	C
BART						
Transbay	1.54	F	0.82	C	1.40	E
Westbay	0.80	C	0.60	B	0.77	C
AC Transit	0.95	C	0.95	C	1.16	D
GGT Bus	0.90	C	0.51	A	0.81	C
GGT Ferry	0.56	B	0.19	A	0.33	A
Tiburon Ferry	0.60	B	0.60	B	1.00	C
SamTrans	1.12	D	0.74	B	1.15	D
CalTrain (SPRR)	0.68	B	0.56	B	0.77	C

/a/ Capacity includes assumed improvements from Downtown Plan Draft EIR analysis.

/b/ Passengers per Seat is the ratio of total demand to seated capacity.

/c/ Level Of Service is scale ranging from A to F that relates P/S ratios to passenger loading conditions on transit vehicles.

/d/ An unreal situation. Capacity increases will not occur if development stops.

SOURCE: Environmental Science Associates, Inc.

Please Note: Pages A-44 - A-47 of the DEIR Appendices have been deleted.



30X MARINA EXPRESS - BAYSHORE AVE. AND ARIETA AVE.
Wednesday, October 7, 1981 - 8:00 A.M. - Inbound



● J CHURCH - CHURCH ST. AND DUBOCE AVE.
Tuesday, September 29, 1981 - 9:00 A.M. - Inbound

FIGURE D - 1
Photographs of Peak Muni Loading Conditions
SOURCE:
Environmental Science Associates, Inc.



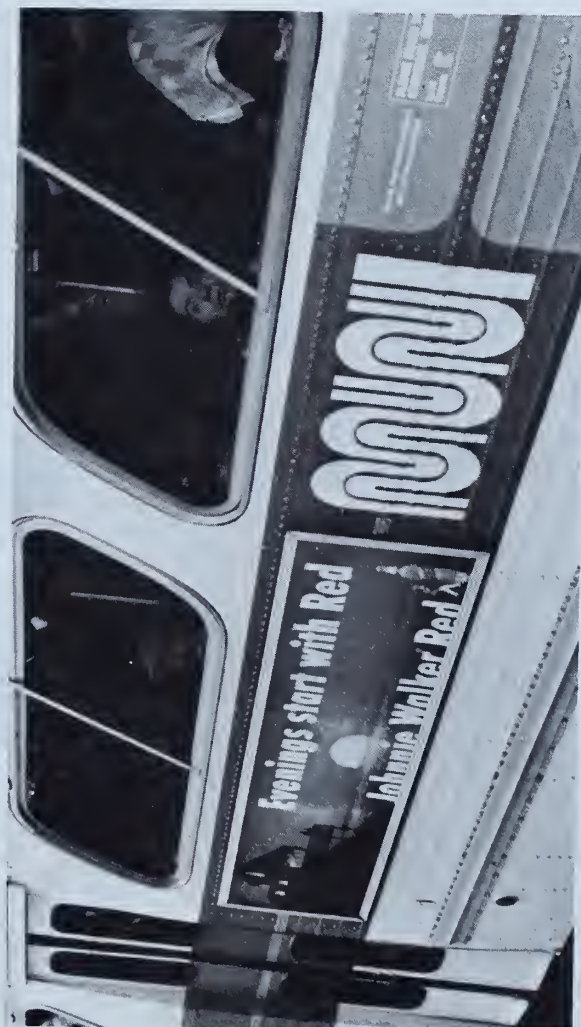
K INGLESIDE - VAN NESS STATION

Wednesday, September 9, 1981 - 8:00 A.M. - Inbound



N JUDAH - VAN NESS STATION

Wednesday, September 16, 1981 - 5:00 P.M. Outbound



38 GEARY - VAN NESS AVE. AND O'FARRELL ST.

Wednesday, October 21, 1981 - 9:00 A.M. - Inbound



38 GEARY - VAN NESS AVE. AND GEARY BLVD.

Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

FIGURE D - 1

Photographs of Peak Muni Loading Conditions

SOURCE:
Environmental Science Associates, Inc.



M OCEAN VIEW - CIVIC CENTER STATION
Wednesday, September 9, 1981 - 8:20 A.M. - Inbound



L TARAVAL - VAN NESS STATION
Wednesday, September 16, 1981 - 4:50 P.M. - Outbound



14 MISSION - MISSION STREET AND SOUTH VAN NESS AVE.
Tuesday, September 29, 1981 - 5:45 P.M. - Outbound



N JUDAH - DUBOCE AND CHURCH
Wednesday, June 8, 1983 - 8:00 A.M. Inbound

FIGURE D - 1

Photographs of Peak Muni Loading Conditions

SOURCE:
Environmental Science Associates, Inc.

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m²). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely un-

comfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.



The threshold of **CONGESTED FLOW**. The first eleven people in the view have about 16 sq ft (1.5 m²) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.



The onset of **CROWDED FLOW**, with an average of about 24 sq ft (2.2 m²) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.



The midpoint of the **CONSTRAINED FLOW** range, with about 30 sq ft (2.8 m²) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

FIGURE D-2

Photos of Pedestrian Flow Levels

SOURCE:
Pushkarev and Zupan



The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m²) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.



The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m²) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.



The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza—which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture—have almost 130 sq ft (12 m²) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m²). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.



Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m²) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

FIGURE D-2

Photos of Pedestrian Flow Levels

SOURCE:
Pushkarev and Zupan

APPENDIX E: WIND STUDY METHODOLOGY

This summary of wind study methodology is based on the report prepared by Bruce R. White, Ph.D., Associate Professor of Mechanical Engineering at the University of California, Davis. The study is independent of the University. This report is available for review at the Office of Environmental Review, 450 McAllister St., San Francisco.

A 1 inch = 50 ft. scale model of the downtown San Francisco area surrounding the proposed building for several blocks in all directions was provided by Environmental Science Associates. The model included three configurations (existing, project, and alternative project conditions). Proposed, approved and under construction buildings in the project area were included in the model: 655 Montgomery St., Bank of Canton headquarters, 456 Montgomery St., 580 California St., and 550 Kearny St. addition.

The model was tested in a wind tunnel that allows testing of natural atmospheric boundary layer flows past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 ft.), a test section of 1.22 m (4 ft.) wide by 1.83 m (6 ft.) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 to 4 meters per second (m/s) or 4.8 to 19.3 miles per hour (mph).

The wind study was divided into two parts: flow visualization and wind-speed measurements. The flow visualization observations were performed by injecting a continuous stream of smoke at various near-surface locations. The subsequent motion of the smoke was recorded, and prevailing wind directions were determined. Wind-speed measurements were made at 22 surface locations with a hot-wire anemometer, an instrument that directly relates rates of heat transfer by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. Both the mean wind speeds and corresponding turbulence intensities were measured. Thus, high wind speeds and gustiness (large variable changes in wind speeds over short changes in time) could be detected. Hot-wire measurements made close to the surface have an inherent uncertainty of $\pm 5\%$ of the true values. The ratio of near-surface speed to freestream wind speed was calculated from the hot-wire measurements. These speeds are discussed in the text.

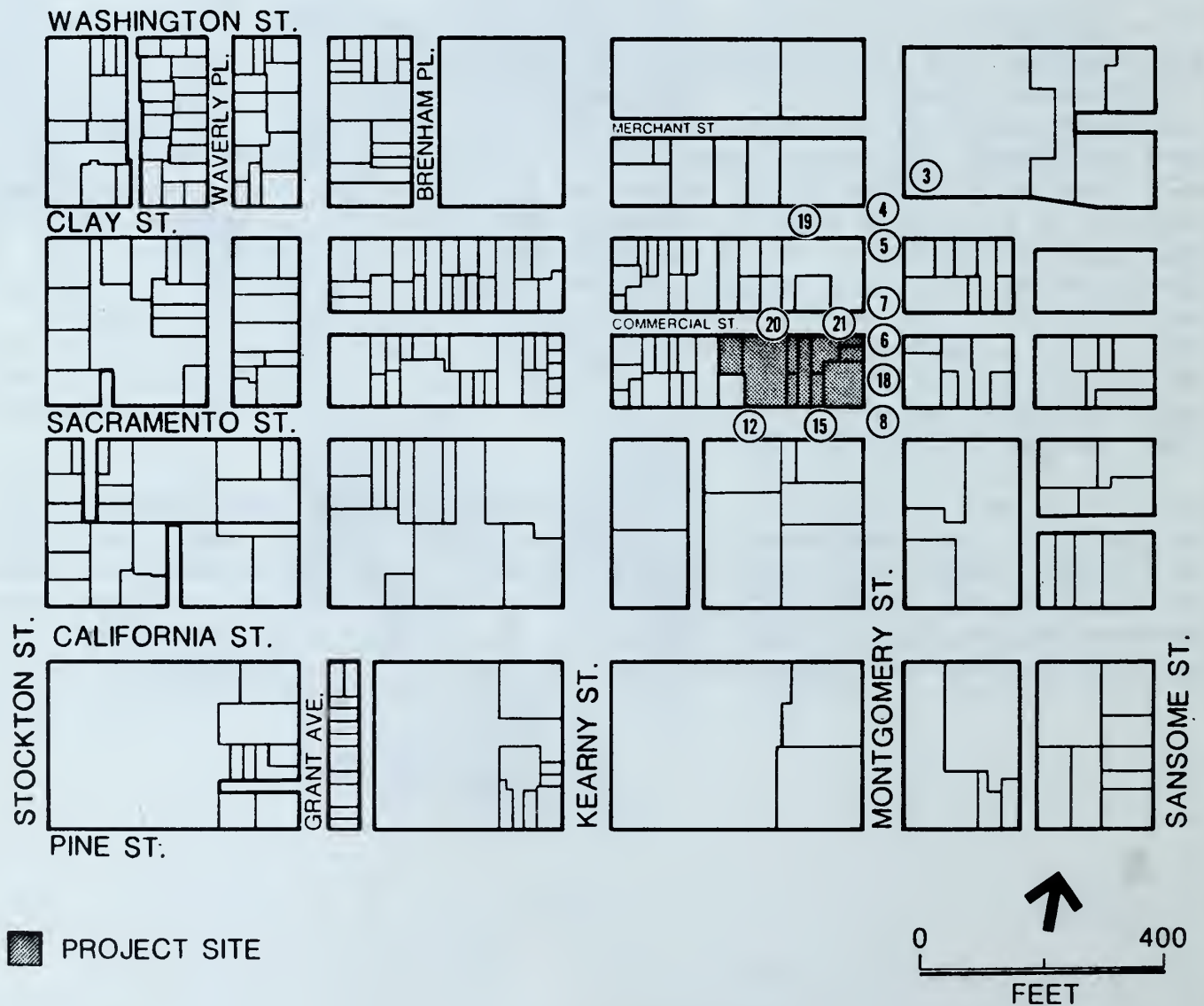
Experiments were performed for three prevailing wind directions (westerly, northwesterly, and southwesterly) for the existing, project, and alternative conditions. These wind conditions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. All hot-wire measurements were taken at the same series of surface points around the building site for the three wind directions and the site conditions.

TABLE E-1: WIND SPEED EFFECTS

Wind Measurement Location	Wind Direction and Development Case *					
	West		Southwest		Northwest	
	1	2	1	2	1	2
3	3.7	4.1	4.2	4.8	12.2	11
4	3.9	6.2	6.1	6.2	6.6	6
5	7.1	8.1	7.3	7.1	8.8	9
6	3.0	3.2	3.9	6.2	4.1	10
7	3.9	5.1	3.7	4.1	3.7	4
8	3.2	5.9	3.7	3.6	6.9	4
12	3.2	5.9	3.9	4.8	6.1	6
15	4.3	7.7	4.7	4.8	6.9	10
18	2.1	7.8	3.5	2.1	2.6	3
19	7.1	7.1	8.8	10.2	4.4	4
20	7.7	7.4	7.0	8.2	6.3	6
21	5.1	9.2	5.2	6.5	5.3	6

* Case 1: Setting
Case 2: Proposed Project

SOURCE: Bruce White, Ph.D.



APPENDIX F: SAN FRANCISCO AIR CONTAMINANT SUMMARY 1980-1982

STATION: 900 23rd Street, San Francisco

<u>POLLUTANT:</u>	<u>STANDARD</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
OZONE (O ₃) (Oxidant)				
1-hour concentration (ppm /a/)				
Highest hourly average	0.10/b/ 0.12 /c/	0.09	0.07	0.08
Number of excesses of State standard		0	0	0
Expected Annual Excess (National)/d/		0.0	0.0	0
CARBON MONOXIDE (CO)				
1-hour concentration (ppm)				
Highest hourly average	20 /b,e/	10	8	12
Number of excesses of standard		0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9 /b,c/	7.5	5.3	9.1
Number of excesses of standard		0	0	0
NITROGEN DIOXIDE (NO ₂)				
1-hour concentration (ppm)				
Highest hourly average	0.25 /b/	0.17	0.11	0.13
Number of excesses of standard		0	0	0
SULFUR DIOXIDE (SO ₂)				
24-hour concentration (ppm)				
Highest 24-hour average	0.05 /b/	0.018	0.016	0.012
Number of excesses of standard/f,g/		0	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m ³)/h/				
Highest 24-hour average	100 /b/	173	103	126
Number of excesses of standard/g/		6	1	3
Annual concentration (ug/m ³)				
Annual Geometric Mean	60 /b/	52.1	56.0	57.0
Annual exceedance of standard		No	No	No
LEAD (Pb)				
Calendar quarter concentration (ug/m ³)				
Highest quarterly average	1.5 /c/	0.53	0.35	0.40
Number of excesses of standard		0	0	0

(Continued)

APPENDIX F: SAN FRANCISCO AIR CONTAMINANT SUMMARY 1980-1982 (Continued)

- /a/ ppm: parts per million.
 /b/ State standard, not to be equaled or exceeded.
 /c/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).
 /d/ Expected Annual Excess is a 3-year average of annual excesses of the National standard.
 /e/ The California CO standard was revised to 20 ppm in January 1983.
 /f/ Exceeding the SO₂ standard is a violation only if a concurrent excess of the state ozone or TSP standards occurs at the same station. Otherwise, the national standard of 0.14 ppm applies.
 /g/ Number of observed excess days (measurements taken once every 6 days).
 /h/ ug/m³: micrograms/cubic meter

SOURCE: BAAQMD, 1980 - 1982, Contaminant and Weather Summaries, and CARB, 1980 - 1982, California Air Quality Data.

APPENDIX G: HIGH RISE OFFICE PROJECTS INCLUDED IN COMPARATIVE ENERGY ANALYSIS

<u>EE Number</u>	<u>Project</u>	<u>Gross Square Feet</u>
80.26	101 Montgomery	248,480
80.337	201 Spear	262,000
80.349	Spear/Main	308,000
81.61	Daon/Main	264,683
81.104	Washington/Montgomery	329,800
81.113	Central Plaza	353,160
81.183	Mission/Main	398,426
81.195	388 Market	342,900
81.493	71 Stevenson	324,600
81.705	580 California	340,000

SOURCE: Environmental Science Associates, Inc.
